

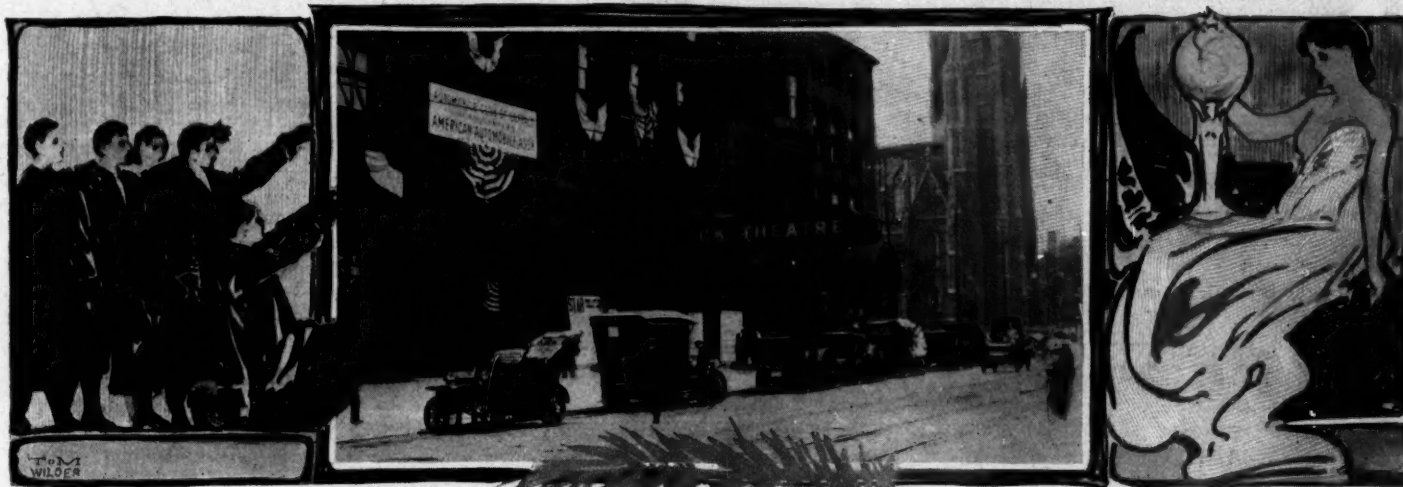
# MOTOR AGE

VOL. X No. 3

CHICAGO, JULY 19, 1906

\$2.00 Per Year

## GLIDDEN TROPHY TOUR NOW HALF OVER



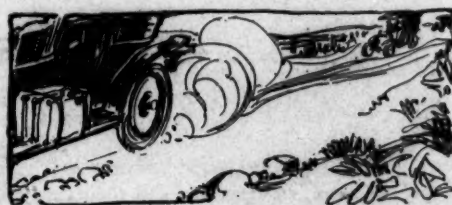
Montreal, Quebec, July 18—Special telegram—With 6 days of the running in the second annual Glidden tour completed there are forty-seven contestants for the Glidden and Deming cups remaining on the score board tonight. This does not mean that all those who have disappeared from the list have been utterly put out of commission. The only out and out abandonments have been four. The others having lost more or less points, preferred to continue as mere free lances escorting tourists. Of the forty-seven no fewer than twenty-seven have completed every one of the twenty controls within the schedule time, a record unparalleled in the history of automobile reliability competition. In all sixty-three cars, embracing contestants, officials and escorting tourists, took out clearance papers at the Canadian border this morning.

Since the tour started from Buffalo last Thursday there have been all sorts of adventures, and not a day has been what could be called tame. One car has been burned up, a truck nearly slid down a mountain, tourists have been lost, and some arrested, but everyone is game and there is no talk of quitting, despite the strenuousness of the contest. There have been misunderstandings over the scoring, but the officials have shown every desire to straighten out the tangles, the result

a cheerfulness which testifies how fully the competitors realize what a tough job Tucker and Ferguson have. Few are kicking over the decisions.

Lozier, No. 62, was charged with 118, but claimed the checker made an error of 59 minutes ahead of time and produced witnesses to prove that he was waiting at the checking station in question with the rest. He pointed out the alleged absurdity of his being charged with running an hour ahead of all the rest. W. C. Durant, Buick, also protested against the four points charged against his car the first day.

The score was posted tonight. It is official so far as the figures in the fourth, fifth and sixth days go. The grand total as posted embraces corrections and rebates allowed in the score of the first 3 days forwarded Motor Age from Saratoga. This week's score, together with the grand total for the 6 days of running, is shown



elsewhere in Motor Age in a table which enables one to get a comprehensive idea of the situation.

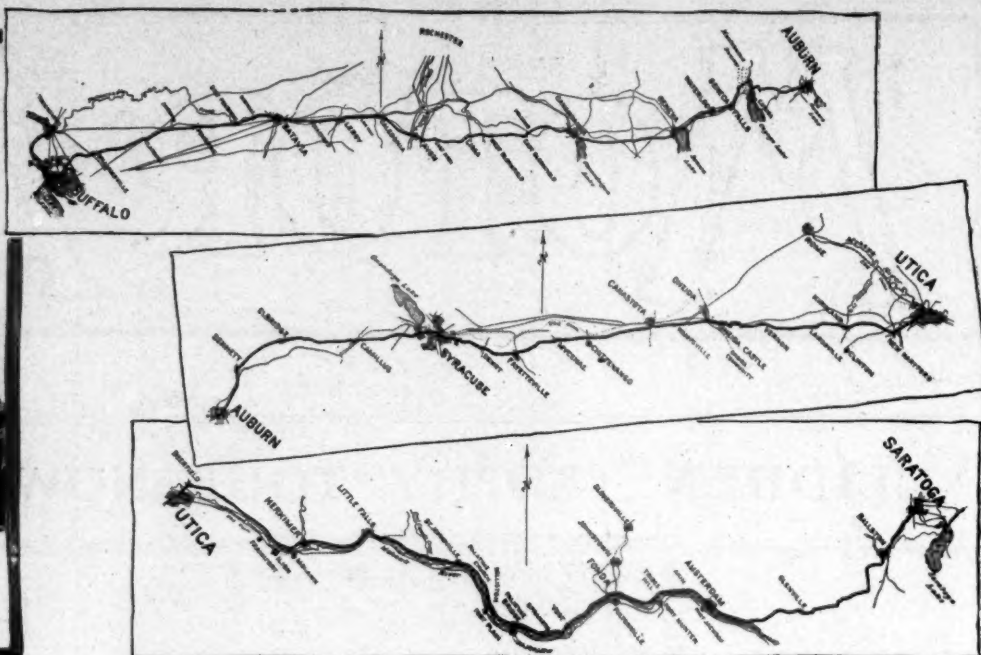
It now seems likely that not only will there be clean scores but ties when the cars reach Bretton Woods at the end of the tour and that the committee may have to put them to a further touring and hill-climbing test.

Splendid work is being done by the pilot cars, which start an hour ahead each day and spread the confetti. One is a White steam runabout manned by Walter C. White. The other is a little 10-horsepower Maxwell speedster piloted by H. A. Grant. This pair easily makes the run at about a 25-mile-an-hour average. The confetti that drops at possibly disputable turns has obviated almost entirely any straying from the right path.

Everyone along the route is glad to see us. At one place a black-coated, white-chokered dominie yelled a greeting through a megaphone from the porch of his parsonage. Twelve somber-garbed and white-bonneted sisters sat in a semi-circle on the lawn before a convent and, led by the mother superior, forgot the pious sedateness of their order long enough in their enthusiasm to wave a greeting to the hurrying caravan. From every porch, front yard, gate and fence came a welcoming wave of the hand, to which none



THE MAXWELL AS PATHFINDER



MAP SHOWING FIRST THREE RELAYS OF THE TOUR

of the tourists neglected to respond. Laborers stopped their work to cheer, railroad engineers and firemen blew whistles and rang engine bells, and passengers waved handkerchief from the car windows at the passing automobilists.

#### BUFFALO TO AUBURN

Auburn, N. Y., July 12—Here ended the first day of the Glidden tour of 1906. Sore muscles and weary bones attested the fact that 132.7 miles of highway, rough and rutty most of the way, had been covered. The schedule, which called for 7 hours 52 minutes an average of some 17 miles an hour gross, had been approximately maintained by the whole bunch of seventy cars, of which twenty-one came through with perfect scores, and not 10 per cent were far enough behind to be worth mentioning. The experiences of the day awakened the tourists to the realization that a 17 miles an hour rate was fast enough to demand live hustling throughout and that the time schedules had set for them the most strenuous task an American contest has yet called upon cars and drivers to perform. It was a case of banging it through all the way to within a few miles of the checking station, that a safe margin might be gained to provide against punctures, needed adjustments and possible accidents.

There was not much formality connected with the start at Buffalo this morning. Any time between 7 and 10 a. m. was permissible for starting, but the majority got under way by 8:30. As soon as the last one left the big six-cylinder Pierce lifted anchor and started and the second annual tour for the Glidden trophy was in full blast. There were sixty-five cars that made good their nominations and there were 272 passengers on them, forty-two being women. Of this number fifty-one were after the Glidden trophy and the other fourteen either tourists pure and

simple, or rigs for the tour of the officials.

The day's run was divided into four stages, with checking stations at Batavia, 38.3 miles; Lima, 69.7 miles; Waterloo, 111.4 miles, and at the finish at Auburn, 132.7 miles. The time schedule was arranged and will be arranged proportionately throughout the run without any regard to road conditions. The basis of the schedule is the legal speed limit, with due allowance for slowing down through towns and in passing teams. At each station there was a checker, whose presence was indicated at least a furlong away by a black and white checked flag.

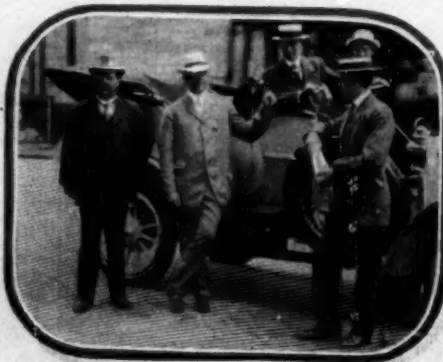
There was a lot of misunderstanding today of the time-checking modus operandi. Some understood that 59 seconds leeway was to be allowed. Some did not understand that watches could be compared with the time pieces of the checkers. Accordingly, some got away ahead of time and were penalized two points per minute, while others were late and lost a point a minute thereby. There was a pretty how-de-do at the finish over the matter, but the committee ruled that the reports of the checkers must stand.

It looked, however, as if the new system would work out all right. There was no racing except against time. The cars

being started at least 1 minute apart, there was no congestion at any point of the road. At the checking station there would be from four to six cars awaiting their turn to go, while their crews made adjustments or replenished fuel. As a rule the cars arrived from 10 to 20 minutes ahead of schedule and there were few narrow escapes. As a car crossed the line its driver would call its number and the checker would call the time. The latter was forbidden to discuss the announced time and there was a notable lack of attempt at argument at the stations. Many of the contestants thought they were up against a watch and guess game, and even prepared to accept their luck philosophically for the moment.

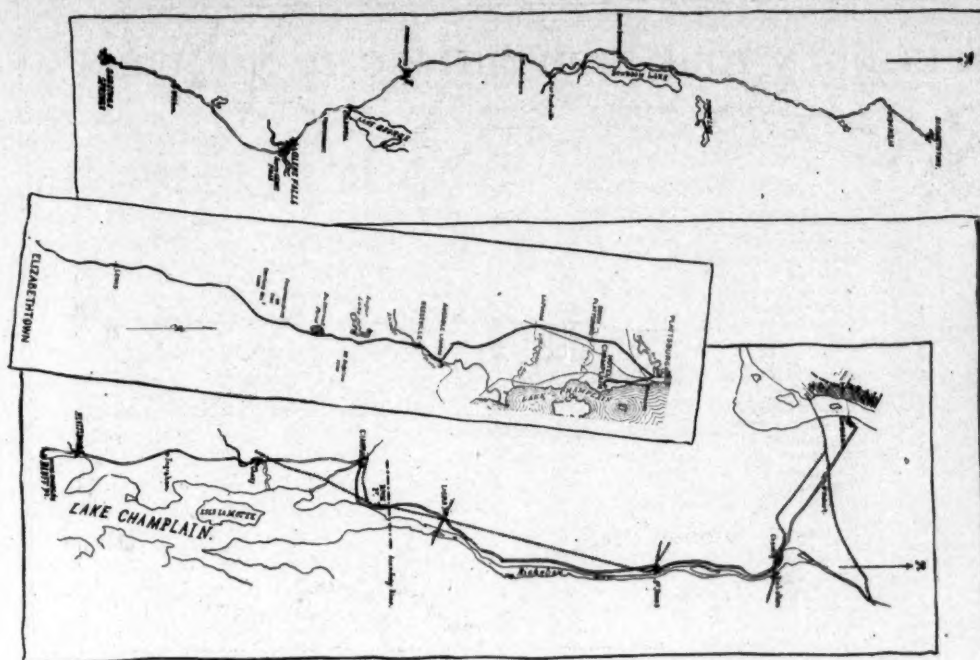
Lima, where the second checking station was located, furnished the first sensation of the day. F. Ed Spooner, a photographic free lance, was gathered in by a hayseed constable for exceeding the 10-mile speed limit, though his speedometer showed under that rate. He was told that \$25 was the price and that it could be paid spot cash without going before the justice. Spooner was cussin' mad and seized a red flag to warn the others. Then the constable fined him another five-spot for profanity. The next victim was N. H. Van Sicklen in his Apperson. Van chose to be taken before Judge Thompson, and it cost him \$3. This was what Tommy Forbes, the Reo pilot, paid; but Archie Hughes put up an argument and it cost him \$5 to call the judge. Tommy Forbes lost some points, too, by the delay.

A more serious trouble came to Webb Jay as he was taking on gasoline in the outskirts of Geneva, which cost him his car, his grip and all of his wife's luggage. At this point a White trio—Jay, Sheridan and Coleman, who traveled together White fashion—were met by an expressman and an assistant with big cans of gasoline.



GLIDDEN, DEMING, JAY AND GORHAM





MAP SHOWING SECOND THREE RELAYS OF THE TOUR

All hands in Jay's car had fortunately dismounted. In the haste of the filling the mechanic had left the pilot light burning. With the first sloppy pouring by the expressman the gasoline burst into flame and enveloped the car. In rushing away the other cans were upset and added fuel to the flame. Coleman drove ahead and Sheridan pushed his car back out of danger. The two expressmen were enveloped in flame, but were thrown on the ground, rolled and bombarded with dirt. The assistant was badly burned and the expressman escaped with a blistered arm. The tourists tore the clothes from both. The car was a total loss. Jay was frenzied with anger and disappointment, and another car will meet him at Saratoga in which he will complete the journey as a mere tourist. In the car with him was Mrs. Jay, his son Jesse, a New York photographer, A. H. Shapiro, and Jay's mechanic, Adams. All lost everything they had in the way of luggage.

The day's ride was through a pretty farming country with gentle scenery. There was a splendid road for 23 miles out of Buffalo, and then intermittent highway tumbles began and finally ended with a ratty run from Waterloo in. There was no trouble through losing roads, thanks to the confetti spread by the pilot, Walter White, in a White runabout, and H. A. Grant, in a Maxwell speedster.

The Osborne house furnished miserable and crowded accommodations at exorbitant rates, \$3 being charged for a bed or cot in a room with four, and meals extra. There was kicking galore, and tourists will be warned against the Auburn inn hogs, for the other hotels were equally guilty. The Automobile Club of Auburn, though, did its best to give the tourists a good time by taking them out to a lakeside resort. The passing of the tourists was a great event for the people of the country-

side. Flags were displayed in the towns and before every farmhouse were groups of men, women and children, waving flags and handkerchiefs, all highly delighted at having their salutes acknowledged by the tourists.

Jim Becker's Elmore was ditched and his wife thrown out, but Percy Pierce pulled him out. Ed Lozier's car performed the same good Samaritan act for Joseph A. Mechaley and his Pope-Hartford. There were several quick tire repairs reported, ranging from 6 to 13 minutes, formed by high-speed schedule-saving runs, which were necessary to keep up with the schedule for the day.

#### AUBURN TO UTICA

Utica, N. Y., July 13—There were few points lost in today's run from Auburn to this place. The distance covered was 76 miles, for which the scheduled time was 4 hours 20 minutes, an average of some 17 miles an hour gross. The day's journey was divided into three stages with checking stations at Syracuse, 24 miles; at Oneida Castle, 54 miles, and at the finish. The roads presented all varieties, from bad, to fair, to good, with not very much of the latter. The tourists started from Auburn very much ruffled in temper from



THE KNOX BAGGAGE WAGON

the exorbitant overcharges at the hotels—\$3 for a bed or cot over night in a room with four and meals extra being the rule. The clerk's desk was the storm center of a protesting and cursing bunch. Every man registered a mental blacklist against the Auburn bonifaces and it will be very close to never when any future tour takes in Auburn, though the Auburn club was not to blame and hospitable in the extreme. There will be a demand in future tours that contract rates be placed on the tour book and that the rates of all the hotels be printed.

The confusion over the checking system was smoothed today by the announcement that a contestant would have the privilege of comparing his watch with the official at each checking station before crossing the line as many wise ones had done the day before. As a result there were no disputes or claims of unjust scoring today.

At a meeting of the committee held here late this afternoon the disputed scoring of yesterday was considered and a significant bulletin issued requesting that those who claimed to have been wrongly scored at the stations submit their claims in writing. It was easy to see that it was proposed to set things right and get the score started clean.

There were fewer complaints against the hotel accommodations, though there was an overflow from Baggs' to the Butterfield. In the evening those of the tourists who were not too tired to attend were given a smoker by the Utica Automobile Club. These night entertainments, however, are not looked upon with much favor by the Gliddenites, who are generally pretty well tired out at the finish and ready for an early going to bed in preparation for 5 and 6 o'clock calls in the morning. Of course, there are poker parties in the Indian camps.



GORHAM, DEMING, HOWER AND POST

## POINTS PENALIZED IN GLIDDEN TOUR FROM BUFFALO TO MONTREAL

No.	Entrant.	Contest.	Make.	H. P.	Auburn 182.7 miles	Utica 70 miles	Saratoga 90 miles	Elizabeth- town 94 miles	Cham- plain 72 miles	Montreal 72 miles	Total 541.7 miles
1	N. H. Van Sicken, Chicago.	Cup	Apperson	40-45	0	0	0	0	0	0	0
2	Arthur Holden, Cleveland, O.	Cup	Stearns	40-45	0	0	0	0	0	0	0
3	L. J. Petre, Cleveland, O.	Cup	Stearns	40-45	0	0	0	0	0	0	0
4	J. H. McDuffee, Chicago.	Cup	Stoddard-Dayton	30-35	0	0	0	10	0	0	10
5	Ezra E. Kirk, Buffalo.	Cup	Thomas	50	0	0	0	0	0	0	0
6	G. M. Davis, Buffalo.	Cup	Thomas	50	0	0	0	0	0	0	0
7	George Soules, Toledo, O.	Cup	Pope-Toledo	35-40	0	0	0	0	0	0	0
8	W. C. Walker, Hartford.	Cup	Pope-Hartford	25	0	0	0	0	0	0	0
9	P. E. Fenn, Pittsburg.	Cup	Pierce	32	0	0	0	0	0	0	0
10	W. E. Wright, Springfield, Mass.	Cup	Knox	35-40	0	0	0	0	0	0	0
11	R. B. Crauford, New York.	Cup	Stevens-Duryea	50	0	0	0	57	0	0	57
12	H. D. Newman, New Orleans.	Tour	Packard	24	44	25	235	0	0	0	304
13	E. M. Wiley, New York.	Cup	Clement-Bayard	24-30	0	0	Out	0	0	0	Out
14	Elwood Haynes, Kokomo.	Cup	Haynes	50	0	0	3	0	0	0	3
15	J. A. Mechaley, Stamford, Conn.	Cup	Pope-Hartford	20-24	6	5	284	0	5	70	320
16	G. W. Kelsey, Tarrytown, N. Y.	Tour	Maxwell	36	0	0	0	0	0	0	0
17	C. F. Barrett, Hartford, Conn.	Cup	Columbia	24-28	0	0	0	0	0	0	0
18	F. J. Pardee, Chicago.	Cup	Packard	24	0	0	14	00	0	1	15
19	P. P. Pierce, Buffalo, N. Y.	Cup	Pierce	40-45	0	0	0	0	0	0	0
20	Archie E. Hughes, Philadelphia.	Cup	Pierce	40-45	0	0	0	0	0	0	0
21	W. C. Durant, Jackson, Mich.	Cup	Bulck	22	0	0	0	0	0	0	0
22	Augustus Post, New York.	Tour	White	Steam	0	0	0	0	0	0	0
23	Watson Coleman, Lynn, Mass.	Tour	White	Steam	0	0	0	0	0	0	0
24	W. W. Burke, New York.	Cup	Columbia	40-45	0	0	0	3	0	0	3
25	C. G. Widdgeway, New York.	Cup	Peerless	30	0	0	45	74	0	0	119
26	A. L. Rich, New York.	Cup	Lozier	40	0	0	0	0	0	0	0
27	L. F. Braine, New York.	Tour	White	Steam	97	2	0	54	2	0	155
28	J. G. Cassatt, Philadelphia.	Tour	White	Steam	0	0	0	0	0	0	0
29	I. C. Kirkham, New York.	Cup	Maxwell	16	0	0	0	0	0	0	0
30	F. H. Peitsch, Chicago.	Tour	Peerless	30	365	0	0	0	0	0	365
31	T. F. Moore, New York.	Cup	English Daimler	30	12	44	23	0	0	0	79
32	J. L. Snow, Boston, Mass.	Cup	Peerless	30	0	0	0	0	0	0	0
33	James Laughlin, III, Berkshire A. C.	Cup	Cleveland	30-35	0	132	1	0	0	0	133
34	M. S. Hart, New Britain, Conn.	Cup	Corbin	24	0	0	2	0	0	0	2
35	Ernest Keeler, New York.	Cup	Oldsmobile	28-30	0	0	0	0	0	0	0
36	R. K. Owen, Chicago.	Cup	Oldsmobile	28-30	0	0	1	0	0	0	1
37	W. H. Owen, Philadelphia.	Cup	Cleveland	30-35	0	0	0	0	0	0	0
38	W. L. Davis, Hartford, Conn.	Cup	Pope-Hartford	20-25	0	0	0	179	0	0	179
39	W. A. Danzer, Hagerstown, Md.	Cup	Crawford	24-28	0	0	7	0	0	0	7
40	Charles Burman.	Cup	Peerless	46	0	0	0	0	0	0	0
41	A. A. Russell, Grand Rapids.	Cup	Harrison	40	155	28	350	0	0	0	602
42	S. B. Stevens, Rome, N. Y.	Cup	Darracq	40-60	0	0	0	0	0	0	0
43	John Banford, Lansing, Mich.	Cup	Oldsmobile	28-30	0	0	12	0	0	0	12
44	Philip Corbin, Jr., New Britain, Conn.	Cup	Corbin	24	0	0	248	0	0	0	248
45	T. P. C. Forbes, New York.	Cup	Reo	16	3	0	0	0	0	0	3
46	E. R. Lozier, New York.	Cup	Lozier	40	0	0	1	0	0	0	1
47	J. H. Becker, Clyde, O.	Cup	Kimore	35	2	0	0	0	0	0	2
48	W. L. Marr, Jackson, Mich.	Cup	Bulck	30-35	2	0	0	0	0	0	4
49	T. E. Schultz, New York.	Cup	Marmon	30	31	0	0	4	1	0	36
50	F. E. Wing, Boston.	Cup	Marmon	30	0	0	0	0	0	0	0
51	H. K. Sheridan, Cleveland, O.	Cup	White	Steam	0	0	0	0	0	0	0
52	R. H. Knowles, Newago.	Cup	Locomobile	30-35	0	0	0	89	0	0	89
53	Palmer Abbott, New Orleans.	Cup	Oldsmobile	28-30	0	0	0	0	0	0	0
54	G. G. Buse, Buffalo.	Cup	Packard	24	0	0	0	0	0	0	0
55	Charles Parvin, Peoria, Ill.	Tour	Packard	24	21	118	0	0	0	0	139

In setting out and picking up the checkers Tom Fetch in the Packard has about doubled the daily mileage of the others; for he not only first makes the entire run but afterward goes back, picks up and brings home the last two checkers.

## UTICA TO SARATOGA

Saratoga, N. Y., July 14—In the days long ago, the guide books and local histories tell us, the Indians wearied and sore distressed came in from plain and forest and sought renewed strength and rest and relaxation at the healing, health-giving springs, which make this old spa town famous. So with wild war whoops and the scalp of Father Time hanging at their belts the smear-faced, khaki-garbed warriors of the motor came to the springs today filled with the glory of conquest, but sore from the bumps of the plain and the mountain. Soft-faced twentieth century squaws sat upon hotel verandas in all the glories of fashion's toggery.

It had been one long day of ovation to the tourists through all the 95 miles from Utica to the Spa. Town had vied with village in extending courtesies to the automobilists, and pouches, farm house verandas, gates and fences had been lined

with women, old and young, men and boys, waving flags and handkerchiefs in enthusiastic welcome. The American colors were displayed from houses and swung by hand all down the long lane of the triumphant procession. It seemed as if the up-state citizens of the grand old Empire commonwealth realized that in the three score of American made automobiles so successfully conquering the obstacles of the road in their annihilation of time and distance there was being scored a national victory for an American industry and sport of vast magnitude.

On every hand was courtesy extended. Constables and policemen politely reminded the tourists of the speed limits, while they pointed out the way. In one place a young man had armed himself with a red flag to give warning of a bad bump ahead. At another an octogenarian yelled a caution against a series of thank-ye-marms just ahead, at a spot where Dick Kennedy, of White No. 67, told me Walter White broke four springs through lack of warning. At another point a crowd of men shouted the good news: "Better roads ahead." It was the most glorious and general welcome tourists have yet had

in the history of this most glorious sport.

The ride itself was a beautiful one. It was down the Mohawk valley most of the way. The road skirted the New York Central's tracks. Below were the valley and the river, at times narrow and winding their way between cliffs and overhanging trees. Again a broad plain stretched away to lofty hills. A good portion of the journey was over a fine state road. All down the Mohawk valley the pathway was narrow, but one was so busy admiring the scenery and enjoying the ride that he had no time to notice the sharp curves or the hard going. When we came this way 2 years ago on the St. Louis tour there had been rain and our passage was marked by continuous mud splashing and skidding. Today it was dry and if one did not pursue his leader too closely there was no dust to annoy.

Leaving the valley road just beyond Amsterdam the tourists struck a poser of a climb not scheduled in the book. It is known as Schwartz's hill. It was long, rough, steep and filled with headway-killing thank-ye-marms. Car after car was stalled. One blocked a narrow way so that a half dozen earloads fretted and



fumed to get by and were detained 12 minutes thereby. It was hard going to Ballston, in which to make up time on account of the continuous bumps, which threatened disaster to springs.

Several prominent contenders were dropped from the leading bunch during the day's run. Early in the journey Will Birmingham, who was driving Fred Pardee's Packard, leaned forward to adjust something about the magneto. A jolt forced his hand into the magneto, where it was caught and his finger crushed. He was hurried to the next town, where the injured member had to be amputated. Fourteen points were lost to his car through the waiting.

Elwood Haynes dropped from the honor list by punctillious consideration of duty. He had frightened a farmer's horse, which bolted and upset the rig. Mr. Haynes insisted on going back, lending assistance and paying the farmer for his loss.

Charley Wridgway floundered in a sea of troubles. A jolt against a stone broke his gasoline tank and he had to stop and solder on a patch of copper. Then cotton waste got into his oiler, which cost him 30 minutes. Then an insufficiently large radiator gave him trouble. He made up 25 minutes in a run of 22 miles constituting the last control, and despite his three delays aggregating an hour and a half his loss of time was but 45 minutes in the score, owing to a series of whirlwind time-saving runs.

Clement Bayard, No. 20, did not get in until midnight and is consequently out of the run. In negotiating a thank-ye-marm too ambitiously the right knuckle was broken. A blacksmith had to be hunted up to forge a new one. Some quick tire repairing has been scored. As a rule it has not taken over 12 minutes to put in an inner tube. Oldsmobile No. 59 claims the record, with a 3¼ seconds repair. Its crew, made up of James Banford, driver, and Ferrote, Schwalbach and Clinton, passengers, is trained to work together.

#### SUNDAY AT SARATOGA

Saratoga, N. Y., July 15—The Gliddenites have rested long and well today in this beautiful village. The noisy, hurrah time does not come until August, when the horse-racing cohorts put in their appearance and whoop things up. Some have sauntered up and down Broadway or through Congress hall park and the beauti-

ful grounds of Dick Canfield's Saratoga Club. The latter will not open until the 25th, so there was money enough left in the caravan to pay for gasoline and board and lodging during the fortnight of touring yet to come. Some of the cars of the touring division, upon which the ban of garage seclusion is not laid, were out enjoying the beautiful lake drive. For the most part, though, the tourists were content to loaf on the verandas, swap experiences and discuss the scores.

I. C. Kirkham, driver of the 16-horsepower Maxwell, No. 41, boasts of having used but 5 gallons of gasoline in the run from Utica, with a total of but 16 gallons for the entire 300-mile journey from Buffalo.

The run today was divided into four stages with controls at Little Falls, 23 miles; Fonda, 54 miles; Glenville, 73 miles, and at the Grand Union hotel at the finish. The schedule called for 5 hours 34 minutes for the 95 miles, an average of a little over 17 miles an hour gross.

What was hinted in the Utica letter would likely happen has come to pass. Those who lost points the first day through differences in watches and checking station misunderstandings have been given them back.

The points restored were: No. 2, Holden, Stearns, 3; No. 5, McDuffee, Stoddard-Dayton, 2; No. 8, Kirk, Thomas, 2;

had a jolly dinner and reunion at Reilly's in Saratoga Lake tonight. Fourteen of them went and returned in the Knox truck. The feature was the first singing of the Glidden tour song, the poet being R. H. Johnston, of the White Sewing Machine Co. The tune was "Everybody Works but Father."

Walter strews confetti,  
Fergy starts the bunch,  
Reeves he times the finish,  
And no one gets much lunch.  
Tom Fetch sets out the checkers,  
The Pierce car brings them in.  
Everybody works but Deming—  
Ain't that a sin?

Tucker gets the kicking,  
So does Gustus Post.  
In fact, the whole committee  
Gets an awful roast.  
Martin checks the baggage,  
Glidden makes a speech,  
Everybody works but Deming—  
Ain't he a peach?

Wetmore loses his baggage,  
Goes round in a rage;  
Spooner gets arrested  
And pays to dodge the cage.  
Nathan takes some pictures  
And hopes his prints will please.  
Everybody works but Deming—  
Ain't he the cheese?

The Mudlarks present were: Paul Deming, Augustus Post, Harry Unwin, Webb Jay, Percy Pierce, Louis R. Smith, Howard Reynolds, Arthur Jervis, N. Lazarnick, M. C. Reeves, C. H. Martin, R. H. Johnston and W. E. Wright.

The Knox truck has been doing splendid work in carrying the baggage of the tourists. It has left each morning at 6 o'clock

and generally deposited its load at the night control between 4 and 8 o'clock. The first day its load was 3,350 pounds, but this has now been limited to 3,000 pounds, which is its stated capacity. Its time when running is 12 miles an hour. It has been invariably cheered along the road at the night control. It carried its load up Schwartz hill, on which not a few touring cars stalled. The Knox truck has a 16-horsepower air-cooled double-cylinder opposed motor. It is manned by

C. H. Martin, Harry Gifford and James Perry, all clever at their jobs.

#### SARATOGA—ELIZABETHTOWN

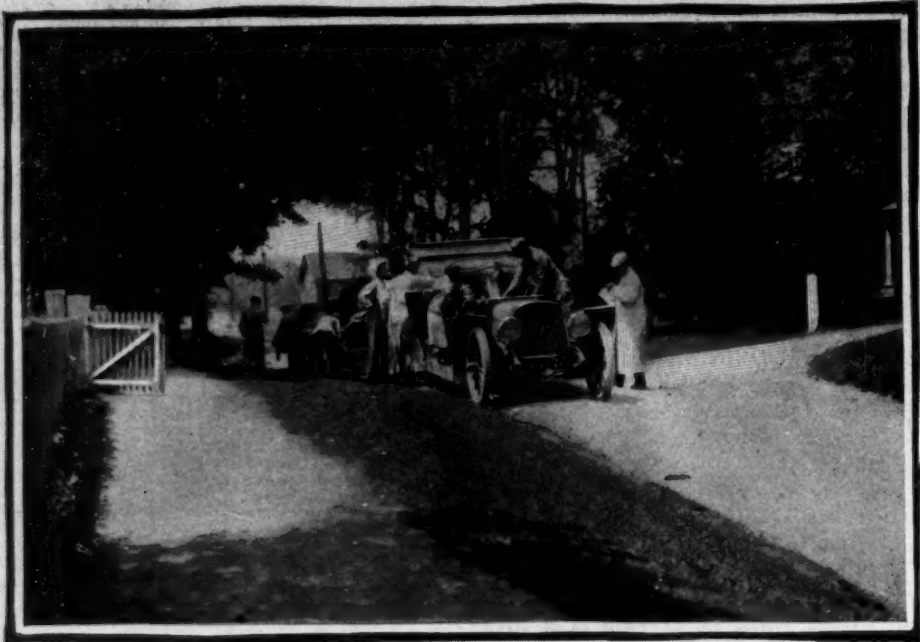
Elizabethtown, N. Y., July 16—Special telegram—A whirlwind scramble over Hurricane mountain, prolifed of stalled cars, blockaded roads, broken springs and angry protests, was the wind-up of today's eventful ride from Saratoga to this beautiful little village nestled in a valley of the Adirondacks. It all came about in this way: Just beyond the last checking



ARRIVAL OF SOME OF THE TOURISTS AT SARATOGA

No. 11, Soules, Pope-Toledo, 1; No. 23, Meechale, Pope-Hartford, 4; No. 37, Wridgway, Peerless, 7; No. 59, Banford, Oldsmobile, 4; No. 43, Peitsch, Peerless, 2; No. 14, Wright, Knox, 3; No. 51, Keeler, Oldsmobile, 1; No. 41, Kirkham, Maxwell, 1; No. 54, Davis, Pope-Hartford, 1; No. 36, Burke, Columbia, 1; No. 33, Coleman, White, 2; No. 73, Buse, Packard, 2; No. 61, Forbes, Reo, 2; No. 58, Stevens, Darracq, 2; E. R. Lozier, Lozier, 118.

The "Mudlarks," veterans of the Pittsburgh run through the great storm of 1903,

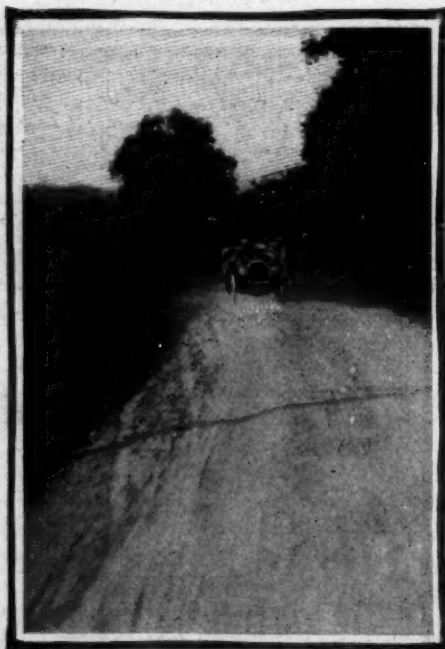


ARRIVAL AT THE CHECKING STATION AT GLENVILLE

station Walter White broke a wheel of his pilot runabout in taking a ditch to avoid a collision with a wagon. This left it up to his mate, H. A. Grant, to push ahead with the Maxwell speedster and lay the confetti. Some miles beyond Grant found the bridge had been broken down through the passage over it of a heavy army supply wagon. He at once doubled on his trail to give a warning. At a roadside hostelry he fortunately encountered Charles Parvin, of Peoria, of the touring division, who had made an early start. Quick action had to be taken by the pair. Inquiry was made for another road and Parvin was sent over it with the confetti, while Grant sought the checker and told him to instruct the cars to disregard the tour book and follow the confetti trail. Neither Grant nor the checker could, of course, tell what action the committee would take in the emergency, so practically every one, fearing to take the risk of losing points, started out to cover the stage in the original schedule time. Accordingly, when the mountain was reached with its narrow roads and steep climbing, there were stalled cars and cars were ditched, in an endeavor to get by them. C. W. Kelsey pulled out Ezra Kirk's car and also aided N. H. Van Sicklen in extricating W. L. Davis from his predicament. The going down the mountain was awful and there was a holocaust of broken springs and parts in the reckless scurrying caravan. Odometers showed that from 13 to 15 miles had been added to the scheduled 95. The committee met at once and decided to add 75 minutes to the schedule and listen to no protests based on blockades of road. There was, of course, kicking from those who had succeeded in making the run with considerably less falling behind the original schedule time. There were also loud protests against two White cars, a Gliddenite driven by H. K. Sheri-

dan and a Deming cup candidate piloted by Augustus Post, who has come by a much shorter route via Mineville, though over what were probably as difficult and rocky roads. The protestants maintained that all cars should have followed the confetti as directed and so surmounted the same distance and difficulties. Should either of these Whites finish with clean scores, it is probable that the committee will have to answer some protests.

Way back in the road the Knox truck had been stalled in a narrow and soft place and blocked behind it far into the night Mrs. Krug and her Cadillac, George Otis Draper and his Packard, and Tom Moore and his English Daimler. The ever-ready good Samaritan, C. W. Kelsey, went back to their aid in his Maxwell, but they refused to desert their cars. All showed



GOOD ROAD NEARING LITTLE FALLS, N. Y.

up before morning except Sidney Gorham, who had wandered off to Mineville, where he spent the night and had the local blacksmith forge a new spring. The A. A. A. secretary is having the time of his life running his Winton as a free lance and playing the good fellow to every needy tourist along the road.

Tonight's garage is an open park in which the cars are drawn up in a hollow square between the hotel fronts. This hotel is crowded and alive with lights, music and dancing. Quite a bunch discovered a rude swimming pool with an equipment of three bathing suits. They drove some little girls away and persuaded a laundry adjoining to close its shutters and then renewed their boyhood days in a naked frolic in the cold mountain spring pool at the place.

With today's run the real touring in picturesque and strange regions began, the journeying of last week having been through conventional farming country and down the Mohawk valley, familiar to not a few. Few had been over today's scheduled route, which lay through a most picturesque region, passed Lake George and the Schroon lakes and ended in the Adirondacks. From Saratoga to Caldwell, where was had the first peep of Lake George, far too much of the way for comfort was over an antique plank road with sand at the side, offering poor refuge. Beyond Caldwell, however, there was a splendid road for several miles, which finally narrowed to a picturesque path through woods and hills. The ride by both the Schroon lakes was a beautiful one. Handsome villas and pretty cottages were perched on the highlands with an enviable prospect of broad lake and distant mountain. At one point a bevy of picnicking summer hotel girls gave the tourists an original greeting, actually dividing their luncheon with them by putting olives, pickles, cake and the like in envelopes, with pencil-written messages of good will and tossing them into the cars. At and beyond the last checking station the tourists encountered the Fifth United States Infantry, Colonel C. B. Coles commanding, marching to Albany, where they will take train to the Pennsylvania encampment. They marched in single-file on either side of the road and were accompanied by a supply train. In their chats with the motorists at the checking station they laughingly compared their daily 18-mile walk, carrying 72 pounds of equipment, with the easy lot of the tourists. Several joined the tour at Saratoga, among them being: George Otis Draper, New York; Packard; Mrs. Fred Krug, of Mineola, wife of the well-known Vanderbilt race course boniface, Cadillac; and James M. Morrison, of Boston, Pope-Toledo. Webb Jay also rejoined the party in a White car sent from New York by Carl Page. Jay fortunately received Walter White's message of distress before he started and brought him another wheel.

The day's run brought lots of points to



contestants, but seems to have put only three of them off the honor list—No. 5, McDuffee, Stoddard-Dayton; No. 36, Burke, Columbia, and No. 16, Stevens, Duryea.

### CIVILIZATION AGAIN

Hotel Champlain, N. Y., July 17—Special telegram—After a short and yet most varied run the tourists having been enjoying a long rest this afternoon and evening at one of the best situated and most magnificently appointed summer hotels in the United States. Built in the center of a splendid park on the top of a hill, it commands a view of the vast lake below and of the distant Adirondack mountains in the rear. The transition from the wilderness to civilization came when 10 miles from here the caravan left the rough backwoods roads and entered upon the magnificent broad boulevard to Plattsburg and the hotel park. The run to Ausable Chasm, where set the intermediate checking station, was over a wild mountain road

The committee had issued an edict stretching the compulsory wait over at Ausable from 1 to 2 hours. Those who scrambled through the gorge shot the rapids in the canyon and rode back through the woods in the stages thanked the committee for compelling them to make the memorably picturesque excursion. During the afternoon some swam in the lake, others enjoyed the grand view from the porches, while others took drives to Plattsburg and over the beautiful roads of the neighborhood. This evening there was a concert by a crack Troy glee club of many voices and a chance given to look on and see how fashionable folk disported themselves, before leaving society to its tame and effete pleasure and once more plunging into the wilderness. The short day's run brought few penalties and put one car, Mr. Knowles' Locomobile, off the honor list, leaving the clean score squadron of leaders with twenty-six in its ranks.

The Knox truck, which had been stalled all night in the mountains in the sand, its crew sleeping in the log cutters' cabins, arrived here at 4 o'clock amid great cheering. The big six-cylinder Pierce had gone to its rescue this morning and extricated it from its perilous position at the edge of a steep ravine. This same free lance Great Arrow of the first of the 1907 crop has been doing great running. It has started last always, picked up the furthest checkers, and carried besides a load of newspaper men and leave-over and stranded pilgrims besides, the load at times aggregating a dozen.

Charles J. Glidden pronounced a theory that the whole journey should be ridden at the average rate set by the schedule so as to save tires and to confine speeding to emergencies. The cup donor declared that by following a moderate touring speed he had suffered but two punctures in 8,500 miles. The "wise" drivers of experience, however, laughed at the suggestion and several punctures near the end of a stop, when it would



STATE ROAD TO HOTEL CHAMPLAIN

have been impossible to make up lost time, seemed to prove the fallacy of the Glidden theory, whatever success his host on the run, Augustus Post, had had in following it.

### ON TO MONTREAL

Montreal, July 19—Special telegram—Canada gave us a grand welcome today. We had traveled but a mile or so over the border before we were greeted by a British flag with the invariable Canadian coat-of-arms emblazoned on it. A few miles further and the French tricolor became predominant as the emblem of welcome, though there was a liberal sprinkling of English jacks. Just as in our own upper New York, the flags flew from farmyards and porticos and were waved by girls and boys. In proportion to the populations the greeting of the Canadian was as general

as that of our fellow countrymen. The tour ran through the province of Quebec, the whole population of which is two-thirds French. The welcome was full of Gaulic sentiment and enthusiasm.

The first stop of today's run was at Rouse's Point, on the Canadian border. Here things were so well arranged at the custom house that our passing amounted merely to an exchange of papers, lasting but a minute. We were allowed an hour here, but had the privilege of clearing out earlier if we wished, as most of the cars did. We had not gone many miles into Quebec before we struck very fair roads, which continued all the way into Montreal. A part of the way the road skirted the Chambly canal, passing the old fort of that name, with the Richelieu river just beyond. At the Hotel Champlain Elwood Haynes and George Watson each withdrew from the tour. The former had broken a bar and could not replace it. There were several accidents during the day. Six miles out of Rouse's Point the English Dainler ran into the Packard driven by Gus Buse. The latter escaped with a broken spring hanger, but the radiator of the former was broken, causing a long delay. John L. Snow had two punctures in control, but mended them and pulled his Peerless into the checking station without losing a point. The crew of Peerless, No. 26, replaced a bent axle with a new one at the Hotel Champlain and got through without loss.

An error in the tour book mileage caused some trepidation. The distance to the checking station at St. Johns was given at 50 miles, but it proved to be 54, and the distance cards to Montreal on the cards was set down as 78, when it was actually 86 miles. What effect this will have on the score and what the committee can do about lost points can not be told until the score is posted.



MAXWELL REACHES CHECKING STATION AT GLENVILLE



# MOTOR AGE

309 Michigan Avenue, Chicago  
Published Every Thursday by the Trade Press Company  
N.H. Van Sicklen, Manager — Chas. P. Root, Editor

Subscription Two Dollars a Year  
Foreign Subscription Four Dollars

The Western News Company of Chicago and Its Branches Supply Newsdealers

New York Office, 29 West Forty-Second Street  
Official Organ of the American Motor League  
Entered at the Chicago Postoffice as Second-Class Matter.

## BURDEN ON THE AUTHORITIES

**M**OTOR AGE has furnished the city and park authorities of Chicago with a set of rules which if adopted will put motorists and all other users of the highways on somewhere near an equal basis and at the same time so regulate traffic on the streets and drives as to do away with much of the complaint that comes from pedestrians and the lay press. It has been contended that whatever fault existed was not to be attached so much to the drivers of automobiles and horses as to the lack of proper traffic regulations, and this assertion is proved by the experience of places that have adopted some form of regulations. The rules proposed are printed elsewhere and are believed to be sufficient at this time to at least make some sort of start in the matter of educating drivers and pedestrians. There need be little trouble in the management of traffic; the only necessity is a set of simple but positive rules and to have the city and park police enforce them rigidly after they have become understood by all concerned. Such a place as Chicago ought to be ashamed of itself for the loose manner in which its traffic is handled, when the adoption of a few rules will remedy the matter. The trouble is the authorities have been afraid of offending the users of horses, whereas the proposed rules, if adopted, will give more protection to this class of citizen than it has ever had. The rules may be susceptible of change, but their adoption would at least be a beginning, not only for Chicago, but for all places where traffic rules have not been put into effect. Municipal authorities have been slow to comprehend the great change that is being brought about by the automobile; they have not taken the motor car as seriously as they should. They have regarded it as a rich man's plaything instead of one of those things that tell the march of progress. The locomotive and the trolley were so considered at one time. In Paris, London, Berlin, New York and other large cities similar rules have been adopted and are enforced by the police. They are understood by drivers and pedestrians,

and traffic regulation in those places, as compared with that in Chicago, is perfection. The rules were not designed to benefit motorists, or drivers of horses, or pedestrians, but to so improve traffic regulations as to do away with any material cause for complaint. There should be no reason for not adopting and enforcing them rigidly after they are adopted.

## GLIDDEN TOUR LESSONS

**A**BOUT three score motor cars in the second annual Glidden tour, which has now been in progress for a week, are giving the American public a most convincing demonstration of the reliability of automobiles designed by Americans and made in American factories by American hands and of American material. The questions of mere survivorship and ability to get there at some time have been forced into the matter-of-course category. The demonstration has reached a high plane. The cars have not only been getting there but for the most part getting there on schedule time, and on schedule time all the time. During the 6 days of running the tourists have covered 507 miles of American roads—below, as a whole, the not high standard in this country—divided into twenty relays, each carrying its penalties, at an average schedule speed of over 17 miles an hour gross, including all stops for repairs, adjustments and fuel replenishments. The complete stories set forth in other columns tell without dispute how large a proportion has shown absolute perfection and how many have attained approximately clean records. An examination of the figures will show that no such demonstration of the absolute reliability of the automobile has been given in any other country by makers of any kind. But it has not been a tour in the strict sense of the word—it has been a scorch, a test of reliability, a duel of the makers and a test of drivers' skill. The average speed pre-



scribed and the necessity of running close to schedule time have compelled the operators go the limit at times in order to make up for any adjustments on the road. Going the limit of speed over an unknown road is dangerous and is far from touring, but it brings out the weak points and the strong points in a car's construction, and the tour is now considered a test of reliability. The whitewashing process was wrong—there should have been no occasion for whitewashing, an unfair proposition to those who went through without penalization. A tour should be a tour; if a test of reliability, it should be called such. The time schedule basis of reliability tests, however, which has had its initial trial in the run, has solved the problem with more or less satisfaction. Now that a right basis has been found, the system is capable of improvements in a method that will in the end give indisputable results. The system may also easily be elaborated so that cars of different powers and prices, if you will, may be put on an equal competitive footing by a handicap, cars segregated into classes by a different time schedule for each class. In a word, this year's Glidden tour is proving a good and useful thing, well conceived and carried out with no inconsiderable credit to the touring committee of the American Automobile Association and the management in general, whose task has not been an easy one.

## REMOVABLE RIMS

**I**T HAS come to be acknowledged that the winning of the grand prix was due largely to the fact that the machine Szisz drove was fitted with removable rims, a fact borne out by a study of the times made on the various rounds and the time required by other drivers to effect tire repairs. The removable rim was received with more or less skepticism before the big French race, but it is safe to assert that in all future long distance road events this rim will be an important factor, and it is not unlikely those French drivers who take part in the Vanderbilt cup race will be prepared to make changes of tires with as much alacrity as did Szisz. In the absence of rules against the use of these rims, those contestants who do not use some such scheme to effect quick repairs will, in the light of the experience gained through the grand prix, will be at some disadvantage, and the Long Island affair may go not to the swiftest car but to the one that does consistent work and is fitted with some device whereby tires may be replaced with little loss of time. The Americans have time to look into this matter and have had ample warning of what is against them; they must not make the excuse after the race has been concluded that they were at a disadvantage in not having their cars fitted with the latest and quickest devices for the changing of tires during the progress of the race.





## Coming Events

July 5-28—A. A. A. tour; Glidden trophy competition, starting at Buffalo July 12.

July 4-17—Automobile racing at Ostend, Belgium.

July 21-25—Belgian Criterium, an endurance test.

July 26—100-mile reliability test over Elgin-Aurora course under auspices of Chicago Automobile Trade Association and Chicago Automobile Club.

August 5-8—Touring car competition, France.

August—Circuit des Ardennes race, Belgium.

August 22-23-24-25—Annual New Jersey coast carnival. W. J. Morgan.

August 27-September 2—Brescia, Sicily, events. Automobile Club of Italy.

September 1-10—Auvergne cup competition, France.

September 2—Florio cup race, Brescia, Sicily. Automobile Club of Italy.

September 9-20—Automobile meet of Paleniza, Italy.

September 15-16—Mount Ventoux hill climbing competition, France.

September 18—Touring car competition of Provence, France.

September 23—Semmering hill climbing competition, Austria.

September 23—Auto-Cycle Club of France cup race.

September 27—Tourist trophy race, Isle of Man. A. C. of G. B. & I.

November 1-16—Automobile show, Berlin, Germany.

December 7-24—Paris automobile show.

## MOTORING'S GAMBLING

Here is a game that is better than poker and one that will find much favor with automobilists. The chances are bigger and there is no opportunity for bluffing. The game is fast, short and easy and practically without limit. A funeral, to this game, is a godsend, and a herd of cattle equals a royal flush. It requires only two to play the game—in fact, it is impossible to play with more. The players are seated side by side in an automobile—the game absolutely requires an automobile to make it good. The players take the middle of the road and proceed to count the horses, cows, cats, dogs and chickens. Dogs, cats and chickens and ordinary horses and cows count only a point each. White equines and bovines count ten points each. The man who succeeds in counting 100 on his side of the road first wins the game and the stakes. This latter essential feature may range anywhere from \$5 to \$100, or more. If, perchance, a funeral cortege should wend its way past one side of the road, the man on that side of the road would have a walkaway. That is, unless a herd of cows should select the opposite side for a stroll. Humans do not count in the betting. The game is taking a firm hold in Ohio.

## The Week

Englishmen protest over formula used to decide handicap events.

Philadelphia dealers organize for an effort toward bringing about modification of existing automobile laws.

Motor Age drafts set of road rules and offers it to Chicago city and park authorities for their consideration.

Michellin Tire & Supply Co. takes over business of Fanning & Canary, of Chicago, and will sell Michellin products west of Pittsburg.

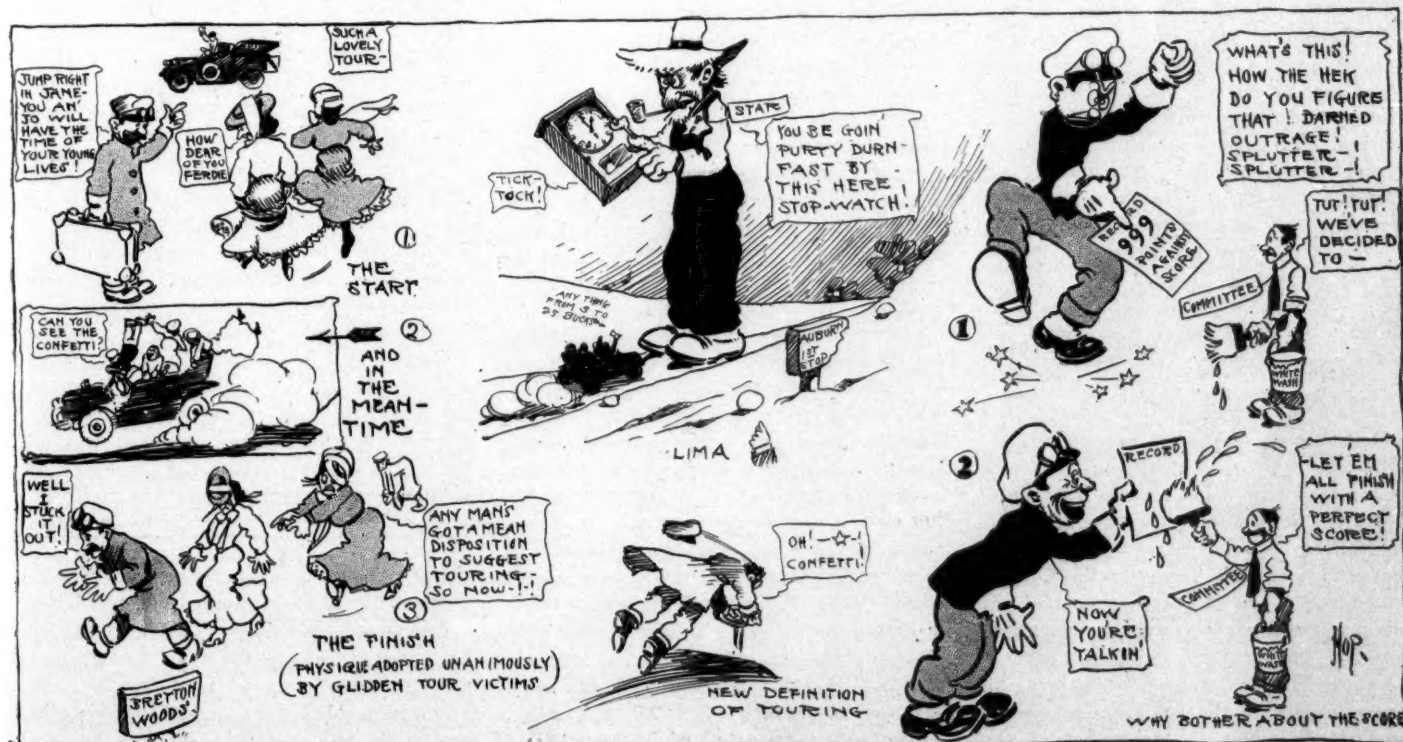
State Commissioner of Motor Vehicles J. R. B. Smith shows he means business by insisting on strict enforcement of the New Jersey law.

Decision in battle of the cylinders in England given to Rolls-Royce six, which scores 2,277 points to the four-cylinder Martin's 1,881.

Paris newspaper plans 3,800-mile for August to take place around France in place of Circuit European, recently abandoned; open only to touring cars.

Internal revenue bureau holds that tax-free alcohol will have to be denaturalized by government officials and that no change in law regarding manufacture has been made.

Glidden tourists start from Buffalo July 12 and pass through Auburn, Utica, Saratoga, Elizabethtown and Champlain and reach Montreal Wednesday night; many manage to escape penalization despite bad roads.



## ART OF TRUCK DEMONSTRATION

### Practice of Giving Free Private Trials and Furnishing Fuel and Driver Considered Unnecessary Philanthropy—Public Exhibitions Considered More Feasible

Chicago, July 16—What would you think of a modern lecturer who, instead of securing some public hall where he could deliver his discourse to his 2,000 hearers at one time, occupying in all but a couple of hours of his valuable time, traveled from house to house of all of these hearers and delivered the lecture to each one, necessitating his paying visits to 2,000 homes and repeating his lecture 2,000 times? Foolish as this may seem, wasteful as it was, the lecturer expending 4,000 useful hours when all could have been done in 2 hours; and poor policy as it is, yet this is the identical policy that many of the American builders of commercial trucks and delivery wagons are pursuing in the selling of their vehicles. They spend 30 days—a good long month—making a demonstration for a single concern and in that time scarcely get one other business house to waste sufficient time to spend a day following the results of the machine's work. More than this, they give the concern for which they are demonstrating 30 days of free work, not even charging for the gasoline or oil used, not to mention the wages of the driver for that time and the wear and tear upon the machine. Their action is, in short, a \$500 present to some firms, hoping thereby to sell one or perhaps three or four machines. Motor Age can cite where one firm has worked this 30-day demonstration scheme on several truck makers, thus making from \$400 to \$500 out of each.

The above is the extreme case, but it is nevertheless a real one and must be counted upon. But while many makers object to the 30-day demonstration they often consent to a week, or 6-day demonstration, giving for that time the service of their truck, supplying it with fuel and lubricant, furnishing it with a driver and storing it over night without a single cent of cost to the firm for whom the demonstration is being made. This certainly flavors of whole-hearted philanthropy on the part of salesmen of commercial machines—unnecessary philanthropy, we think.

Commercial trucks and wagons—a few good makes at least—are beyond the experimental state, but Motor Age does not believe that they have reached that point of perfection where a demonstration before selling is not necessary. There are demonstrations and demonstrations. One demonstration is a nice pocketful of money to the firm receiving the demonstration—the manufacturer being the giver—and another demonstration, while bringing more publicity to the vehicle, does not so lavishly administer to the wallet of the prospective buyer.

Must the sellers of commercial vehicles not demonstrate, then? Demonstrate they must, and do plenty of it, but let it be done in more economical channels than at present. Let future demonstrations be to the many—as the lecturer talks to his audience in an auditorium—and not the individual type where time and money are ruthlessly squandered.

What, then, are the best forms of collective demonstration? Two classes of public demonstration have proven best abroad. First there are the exhibitions devoted exclusively to business motor cars and which resemble our present automobile shows, except in that they are held in summer or autumn seasons, when the actual prowess of the commercial machine can be demonstrated on the streets and country roads and when the weather is not too non-congenial for the interested ones and prospective buyers to follow a machine in a half-day demonstration. Second comes the commercial vehicle competition. Thanks to John Bull, England has led the world in the conducting of commercial or industrial vehicle exhibitions. Credit as also due to France, which has popularized the industrial vehicle outdoors competition. As to the exact nature of the French outdoor competition a reference to the recent French tests will be sufficient.

The test, participated in by upwards of thirty machines, took place in the north of France in a district where manufacturing towns and cities are very numerous—a district which will prove a veritable paradise for the industrial truck and light delivery wagon. In this district the thirty machines made a week's touring, stopping each night at a large manufacturing town or city and passing through three or four similar places during the day. Each vehicle carried its rated load and in 7 days traveled in all 268 miles. The routes lay over regular country roads, roads traveled each day by horse vehicles now doing the majority of the rural and interurban teaming of the scores of factories in the north of France. The test ended at Tourcoing, where the annual exhibition of textile manufacturers was in progress and where the hundreds of manufacturers, met together, had an ideal opportunity of observing the construction and road performances of the many machines entered. In order to give these manufacturers a still better idea of the performances of the machines on the road 2 days at the completion of the tour were spent in circuitous runs out of Tourcoing and back the same day, the trip covering from 60 to 70 miles. These tours were attended by buses filled with manufacturers from the textile world

who were bent on following closely the behavior of these machines under load and traveling over varied rural highways. For a day the machines reposed in a park, undergoing what we would term an exhibition, and during which period the textile manufacturers had an opportunity of making a close inspection, noting as they did just what wear had taken place during the 7 days of road use.

Referring once more to the English method of publicity: There took place at Derby from June 27 to 30, inclusive, the sixty-seventh annual show of the Royal Agricultural Society, in which everything in the industrial motor line for city and rural uses was on exhibition. Stands were filled with motor products ranging from the tricar, with a rated load of 110 pounds, to the slow, massive traction engine, the 10-ton steam lorries and the massive gasoline, alcohol and paraffine motor vehicles. Manufacturers, dealers, mercantile men and farmers from the four corners of the land visited the exhibition, where they had a chance of taking in at one time the country's output in the industrial line. It was a collective demonstration, the cars in the exhibition being for inspection purposes and those outside for demonstrations.

America can make use of both of these methods of collective demonstrations of industrial cars. At present there are sufficient makers of commercial cars to conduct a good exhibition, to be held in some central part of the land where makers from all of the great cities can attend. There are at present sufficient dealers in motor wagons in many of our great cities to organize competition twice a year such as has just been completed in the north of France. Over 2 years ago a competition of this nature took place in New York, being conducted by the Automobile Club of America, from which beneficial results followed. Two years have elapsed since then, and the progress made in the design and construction of trucks and deliveries in the meantime is marvelous.

A competition such as conducted in France—and she has them once or twice each season—lasts but a week or a few days more. It costs the makers no more than a week's demonstration for a prospective buyer—and look at the value of such a demonstration. Every mile traveled is observed by a score or more of interested buyers; being in competition with other machines, there is opportunity to observe the weakness and strong points of all, and authentic reports that reach the ears of millions are compiled from the performance, these reports being visible in scores of ways.

Let American makers waken to the vast possibilities of these methods of popularizing commercial vehicles. They are cheaper by hundreds of dollars than the present method; they consume less time and do missionary work that cannot be done in any other way. Motor Age does not argue that individual demonstrations must



not be made. They must continue, but judicious salesmen will minimize the time and money consumed by them.

The road is open to tests and competitions, the only essential necessary being a spirit of unanimity among the various manufacturers and salesmen. The procuring of sanctions for conducting a test is pretty much matter of form proceedings, and the success largely depends on the management of the controlling committee, the enthusiasm of the entrants, and the performance of the machines. The whole commercial car fraternity must rise to the occasion and put their shoulder to wheel.

#### CALL IT MODEL CLUB

Boston, Mass., July 16—Any one passing through Dartmouth street, near Boylston, on Thursday night last would have been tempted to say that an automobile show was taking place from the immense number of automobiles of all descriptions that almost blocked the thoroughfare. The occasion was not an automobile show but the opening of the new clubhouse of the Bay State Automobile Association, located at 282 Dartmouth street. The clubhouse has been declared by visitors from different parts of the United States to be a model clubhouse in its furnishings and appointments. On entering the building, one sees a spacious hall which leads to two cafés on the first floor. The decoration scheme of these two cafés is in the general scope of stein rooms with beautiful color effects. The stein collection is a most remarkable display; there are scarcely any two alike. On the second floor are two large parlors which are used for the general meeting rooms and for entertainments. These parlors are furnished in automobile red and covered with beautiful Turkish rugs. The directors' room is located on the third floor, on which there are more sleeping rooms and the servants' quarters. The fourth floor is also devoted to sleeping rooms. The clubrooms were crowded with members at the opening. The Dewar cup was presented to F. E. Stanley by Mr. Seeley, the representative of Sir Thomas Dewar.

#### CROSSES SIMPLON PASS

Paris, July 4—An American car has had the honor of being the first tourist car to cross the Simplon pass under its own power. The famous pass has just been thrown open to the motor car, with certain restrictions, and when the official time came to say "Go," Hiram W. Sibley, of Rochester, N. Y., in a Packard was on hand, armed with permission to make the trip. The Packard sailed up and over the pass of 6,700 feet with the American, Swiss and Italian colors flying. In the course of his European tour Mr. Sibley has covered more than 2,000 miles over all kinds of roads and without a slip or break of any kind. He is particularly impressed with the hill-climbing ability of the car.

## IS A "LIVE WIRE" STATE

### Indiana Awake to Advantages of Improved Highways—Premier People as Road Scouts

Indianapolis, Ind., July 15—Indiana is rapidly becoming famous for its "boulevards" and the Hoosiers are waking up to the advantages derived. The motorists themselves are "live wires" on the proposition, and the trade, too, is becoming aroused. Last week H. O. Smith, president of the Premier company, accompanied by one of his drivers, Joe Moore, undertook a trip from Indianapolis to Louisville for the purpose of ascertaining the exact condition of the roads. The distance is 138 miles according to the road map, and the party left Indianapolis in a 24-horsepower Premier at 3 a. m. Taking the main road south, known as the Madison road, they passed south through Southport, Greenwood, Franklin, Edinburgh, Columbus and Seymour. To this point, a distance of 70 miles, the road consists of gravel turnpike, with an occasional stretch of crushed stone turnpike. This road is quite good, except that at this time the dust was from 1 to 3 inches deep, which made fast driving a little precarious owing to the tendency of the car to slide. However, the distance was covered in 2 hours 30 minutes. From Seymour southeast to Scottsburg the road is a little more hilly and not quite so good.

From Scottsburg to New Albany the roadway is filled with ruts and hummocks to such an extent that it is quite impossible to drive rapidly for more than a quarter to half a mile at a time, interspersed in some places with considerable sand. The topography of the country is generally level, with some rolling country especially on approaching the Ohio river section, but there are no hills of any special magnitude, and a larger part of the country through which the road passes consists of beautiful farm lands.

The run to Louisville was made in exactly 6 hours, and taking into consideration the road conditions and the fact that it was necessary to make frequent stops owing to passing teams, etc., the run certainly was an excellent one. The lower portion of the road—that is to say, the last 60 miles toward Louisville—can scarcely be recommended highly to tourists in view of the conditions above stated.

After spending a few hours in Louisville the return trip was begun with the intention of seeing whether the record could not be bettered a little bit, but as it had rained during the day it was found that about 15 or 20 miles of the road south of Scottsburg were in bad condition. These consist largely of clay, which under these conditions made fast driving precarious. In addition to this, a punctured tire delayed matters considerably, and when a new tube was put in it was

found the air pump was out of order, so it was necessary to repair that before the tire could be fixed. In spite of this the return trip was made in only 15 minutes longer time than that required for the down trip. At no time was the motor stopped during the trip except for the replacement of the tire on the return. The Premier company will continue these investigations until it has covered all the roads in Indiana, and hopes at that time to publish the information in neat, concise form for the benefit of automobilists in general.

It is believed here that this action will eventually lead to other manufacturers taking up the good roads project.

#### COUZENS AT THE HELM

Detroit, July 16—A change has been made in the administration staff of the Ford Motor Co. by which James Couzens succeeds Alex. Y. Malcomson as treasurer and director of that concern. Mr. Couzens has acted as secretary and business manager of the company since its inception. He was one of the promoters of the company and his personal and business relations with Henry Ford, the mechanical head of the concern, antedated the organization of the company. With the title of secretary, Couzens has been the actual financial director and custodian of the Ford Motor Co., although Mr. Malcomson held the title of treasurer. The two offices will now be combined in Mr. Couzens in title, as they have always been in fact. It is alleged that for some time there has been friction between the two and, being a heavy stockholder, it is said, Malcomson used his influence to oust Couzens. Mr. Ford, who controlled the situation, though, has stoutly supported Couzens. It is hinted that Ford is the purchaser of the Malcomson interest. The change will not affect the policy or the plans of the company.

#### ALLEGES TRUST OF DEALERS

Cleveland, O., July 17—A prominent Cleveland automobilist has entered a complaint before the county prosecuting attorney asking that the automobile garage owners in Cleveland be investigated as a trust. The party making the complaint declares that nearly all supplies are furnished at uniform prices which are so high it is impossible for a poor man to own an automobile. He claims there is a combination among the various dealers to hold up prices and gouge the public for repairs. The dealers deny they have any combination and claim if some prices are uniform it is accidental. They point to the fact there is a wide range of prices for storage of machines, some of the establishments charging as high as \$25 a month for storage, while others charge only \$12. Some of them state they have no set price for storing, but charge according to the style, age and size of a machine and its condition.

## WISED UP ON ALCOHOL

### Internal Revenue Man Says Denatured Product Is Still Under Government Control

Washington, D. C., July 14—The internal revenue bureau has received a letter in which the writer said he wished "to get in touch with the alcohol situation" and asking to be informed as to the practical operation of the denatured alcohol bill. The writer further said he "does not understand this bill allows any one to make alcohol but that it must be made in the usual fashion—in some way come into government control. Doubtless the same regulations as now in reference to its manufacture are to prevail, but the government, when it releases it from bond, instead of collecting the tax, is to denaturize it."

In reply Acting Commissioner of Internal Revenue Williams said the writer was correct in his views as to the law. There has been no change in the law relating to the manner in which alcohol can be manufactured. Persons who desire to manufacture distilled spirits for any purpose must comply with all the provisions of the law relating to the setting up of distilleries and the operation of the same. The new law simply provides that alcohol, of such proof as may be determined, may be withdrawn free of tax, provided it is denatured, after it is so withdrawn, in such manner that it cannot be used as a beverage or in the manufacture of liquid medicinal preparations. The conditions under which such alcohol may be withdrawn, denatured and put upon the market are to be prescribed by regulations by the commissioner of internal revenue, with the approval of the secretary of the treasury.

These regulations are now being prepared, Commissioner Yerkes now being abroad studying the operation of the free alcohol laws of various foreign countries. The regulations will be ready for general distribution about October 1 next. In this connection it is interesting to note that denatured alcohol will probably become another great product of the southern states. It is claimed cottonseed oil machinery is perfectly adapted to making industrial alcohol from the potato, and it is understood that oil people in Columbia, N. C., are to make the experiment. If this is successfully proven the many cottonseed oil mills of the south, which are idle each summer season for lack of material, will be able to operate all the time and keep their employees together. Furthermore, being already equipped with the machinery, they will no doubt be able to manufacture the alcohol very cheaply. In Cuba alcohol is produced and sold from 12 to 15 cents a gallon, and it is said to make an excellent fuel for running engines. It produces no soot or disagreeable odors.

Buffalo, July 16—Automobile manufacturers in Buffalo are much interested in

the development of the use of alcohol for fuel purposes. At the Thomas plant it was stated that the company had been experimenting with alcohol for fuel for some time and had perfected a carburetor in which it could be used. Trouble in finding a denaturizing substance has been encountered. The difficulty is to denaturize the alcohol and yet mix with it nothing that will clog the carburetor. At the Pierce office it was stated that experiments would be made.

### FLIM-FLAMS BISONS

Buffalo, July 16—Several automobile supply men in this city as well as the Buffalo police would like to get hold of a man giving the name of J. J. Kennedy, who is charged with issuing worthless checks. While scores of automobile men were getting ready to leave the city in the Glidden tour this chap, seated in a big red touring car, stopped in front of the Continental Tire Co.'s store, at 729 Main street. He hurriedly gave an order for two tires. The price of the tires was \$82 and he tendered a check for \$95 in payment. The clerk never suspected anything and gave the man \$13 in change. With the tires stowed away in the rear of his car the fellow sped down Main street. He turned his car into West Huron street and, with a toot of the big siren, stopped in front of the G & J store. He wanted two tire tubes and gave Manager Smith a check for \$30. Smith suspected something wrong, and he handed the automobile man a check for \$7.50 in change. The chap pocketed the check and left the store. In the meantime Smith called up the bank and found that the check he had received was worthless. To protect other automobile supply men Smith called them up on the telephone and warned them.

### MILLION SAVED BY CAR

Atlanta, Ga., July 16—Representative L. F. Livingstone gives the automobile credit for winning a new postoffice for Atlanta. Had it not been for the motor car an appropriation of \$1,000,000 would have been lost and by 3 minutes at that. Representative Livingstone has just returned from Washington and tells the story as follows: "Congress was to adjourn Saturday night at 10 o'clock, and at 5 minutes to 10 the bill had not been signed by the president. What mixed matters all the more was the fact that the president had left for the White house. Four minutes to 10 came and the bill was still unsigned. I'll tell you, we were getting shaky. Everything depended on whether or not an automobile in which we had hurried the bill over to the White house for the executive signature would return before the clock struck. This interim was one of the most ticklish suspenses I've ever felt. But the automobile made good time. Just before the watch hands pointed to 9:57 the chauffeur raced in, and the Atlanta postoffice was saved.

## LAWS FOR ROAD USERS

### Set of Rules to Govern Chicago Traffic Is Sent to the City and Park Authorities

Chicago, July 16—Efforts are being made by Windy city motorists to induce the city authorities and park commissioners to adopt a uniform set of road rules for the purpose of governing local traffic. With this idea in mind Motor Age has drafted what it considers a model set of laws, based on similar measures now in use in Buffalo, Syracuse, New York and Paris, and has sent copies to Mayor Dunne, Chief of Police Collins and the presidents and superintendents of the three park systems. In an accompanying letter Motor Age said:

"Since the advent of automobiles, conditions have been materially changed and it seems that traffic on the public streets should be more carefully regulated. Some of the accidents which have occurred within a year or so are directly traceable to the lack of enforcement of traffic regulations. There seems to be in Chicago an utter disregard of the law of the road pertaining to the meeting and passing of vehicles, and in order that this law which has been in existence for years shall be respected it seems there should be some method to compel its respect. If the city and park systems will get together and agree upon some form of regulations, the users of the streets, whether they be drivers of horses or drivers of automobiles, will understand precisely what is expected of them, and there will be fewer cases for complaint and greater peace in the form of an ordinance. It is suggested that each and every automobile owner be furnished with a copy thereof, and that other means be used to bring the matter before the attention of the people."

The road rules as drawn up by Motor Age are as follows:

#### MEETING AND PASSING

All vehicles must keep to the right of the road at all times, except when passing an overtaken vehicle. Slow moving vehicles must keep as close to the curb as is consistent with safety.

A vehicle passing another, going in the same direction, must pass the preceding vehicle on the left, except in cases of emergency, when, to avoid accident, the preceding vehicle may be passed on the right. In such cases, however, a warning signal, consisting of two sounds of a bell or horn, shall be made. When passing to the left one sound of horn or bell should be given.

A vehicle turning to the right into another street shall turn the corner as near the curb as is practicable.

A vehicle turning to the left into another street shall pass to the right of and to the center of the street intersection before turning. When turning to the left the driver shall raise his left hand to indicate that he intends to turn.

A vehicle passing an overtaken vehicle must keep to the right of the center line of the street, slowing down if necessary until this can be accomplished.

#### STANDING AND TURNING

No vehicle shall stop or stand within the intersection of any street, or within 10 feet of a short corner.

No two or more vehicles shall stand or drive abreast, except when passing.

A vehicle crossing from one side of the street to another shall do so only at a street intersection, and then shall follow the preced-



ing rule about turning. A vehicle shall, at all times, head in the general direction of traffic on that side of the street, and shall at no time stop with its left side to a curb.

#### LIGHTS

All vehicles, including motor cycles, automobiles, bicycles, carriages, cabs, wagons and trucks, shall carry at least one white light in front and one red light at the rear, and keep them lighted at night. Where only one light is carried in front it shall be fixed on the left side of the vehicle, and where only one red light is carried in the rear it shall also be fixed on the left side. A light showing white in front and red in the rear may be used if so fixed as to extend sufficiently to permit its being seen from either direction.

#### SPEED

The speed of any vehicle must not exceed 10 miles per hour, but in turning corners or in congested districts, or where pedestrians are numerous, the speed of the vehicle shall be reduced to a safe and reasonable limit.

#### SYRACUSE ROAD RULES

Syracuse, N. Y., July 17—The Automobile Club of Syracuse has adopted a list of rules and regulations to govern drivers of vehicles in the city. There is an inclination shown on the part of Syracuse automobilists for concerted action on the part of owners and chauffeurs to insure safety and against reckless driving, and the rules issued by the club are for the purpose of lessening the possibility of accidents. The list is as follows:

All vehicles must keep to the right side of the road.

A vehicle passing another going in the same direction must pass the preceding vehicle on the left.

A vehicle turning to the right into another street shall turn the corner as near to the curb as practicable.

A vehicle turning to the left into another street shall pass to the right of and toward the center of the street intersection before turning.

No vehicle shall stop or stand within the intersection of any street or within 10 feet of a short corner.

A vehicle crossing from one side of the street to another shall do so by turning to the left, so as to head in the same direction as the traffic on that side of the street.

No vehicle shall stop with its left side to the curb.

The Automobile Club of Syracuse is doing all in its power to prevent reckless and careless driving of automobiles such as has resulted in deaths and serious injuries in various cities of the country, but from which this city has fortunately escaped so far.

#### CHANGE IN TIRE COMPANY

Chicago, July 18—The Michelin Tire & Supply Co. has been incorporated under the laws of Illinois with a capital stock of \$20,000, having purchased at a substantial figure the business of Fanning & Canary, who have been selling Michelin tires and products in the west. D. J. Canary is president and general manager and Daniel McCay secretary and treasurer of the new concern, which has the entire west on Michelin products. Formerly the New York company controlled the entire country, but the formation of the new concern has brought about an equitable division of territory, the Chicagoans having as far east as Pittsburg. It is the intention also to handle a complete line of automobile supplies and put half a dozen men on the road. Mr. Fanning retires from the business because in a way it conflicts with his duties as sales manager of the Haynes company at the Kokomo factory.

## "SIX" WINS ON POINTS

### Battle of Cylinders in England Gives Victory to Big Rolls-Royce Over Martini

London, July 7—The battle of the cylinders has been ended. The automobile club's certificates have been issued and the figures upon which the result has been decided are stated to be as follows:

	Rolls-Royce	Martini
Hill climbing.....	445	500
Speed on the track.....	401	500
Changing gears.....	100	90
Fuel consumption.....	48	59
Reliability.....	993	580
Silence.....	100	75
Absence of vibration.....	100	77
	2,277	1,881

These are taken to show that the six-cylinder advocates have fairly proved their case. They have all along contended that the six-cylinder engine is in advance of the four-cylinder in that it necessitates fewer gear changes, is more silent, has less vibration and accelerates quicker. It will be seen in the figures that in silence, absence of vibration, and speed changes they have all gone decidedly in favor of the six-cylinder type. The honors in fuel consumption and speed tests on hills and on the flat belong to the four-cylinder. When it is considered, however, that the four-cylinder has a greater piston displacement by about 13 per cent, the superiority in this way is partly accounted for, and it must be remembered that in the four hill trials and four speed trials each car won two, but the balance of points gave the Martini the superiority. This apparent paradox may be explained by the ratio of gearing, which, at 1,000 revolutions per minute, in the Martini four-cylinder was 9, 18, 32 and 41 miles per hour, and in the Rolls-Royce six-cylinder 13, 22, 38 and 47 miles per hour.

There is on this side the Automobile Association, which was called into being by Charles Jarrott, W. M. Letts, S. F. Edge and a few other leading trade motorists who conceived that the close operation of the police trap on the road outlets of London would seriously affect the automobile trade. That was about a year ago. They accordingly obtained an energetic official and formulated a scheme for the patrolling of some of the main roads by cyclist scouts, who were to locate each police trap and to warn every motorist passing into it of his danger. The idea for some time was somewhat coldly received by the other official bodies and rather ungratefully by the motor public. For a while the association languished, supported only by the generosity of a few firms; then its operations were extended, in order to induce wider sympathy, and all the main roads out of London were patrolled for the benefit of week-end motorists. The operations of the association quickly interfered with the amount of money secured from police traps, and the

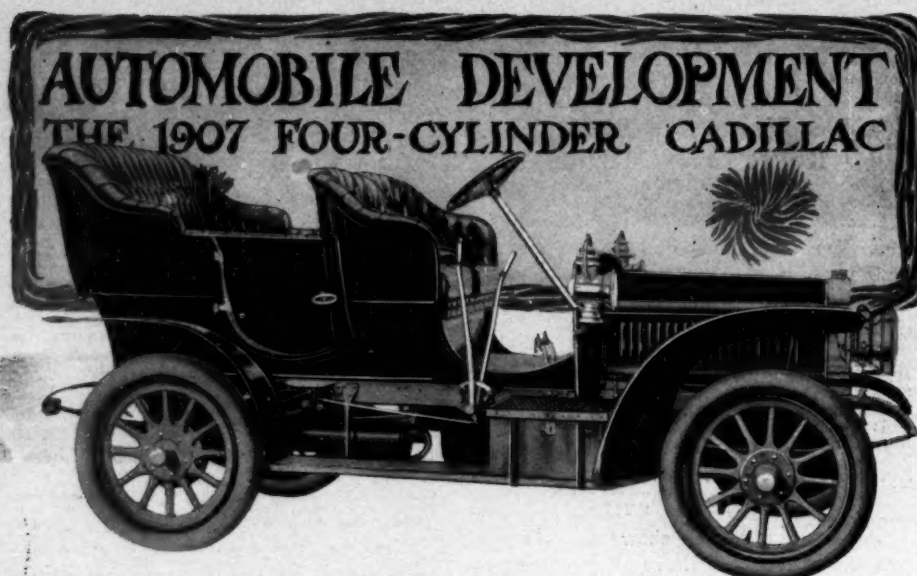
police accordingly turned on the association and its scouts with the usual methods of persecution and interference. Matters came to a climax when one of the scouts who had given evidence on behalf of a summoned motorist captured in one of the traps was prosecuted for perjury and, after a long and expensive trial, acquitted. This persecution was the best assistance that the association could have got. It was well handled, and from a membership of about 150 6 months ago it is now over 1,300 strong, has \$7,500 in the bank, and is now formulating a scheme which will enable it to cover most of the main roads throughout the country, so that every police trap on these roads will be located within 12 hours of any inquiry, and the motorist who desires to travel from London, say, to Aberdeen can, by applying to the secretary of the association, be furnished with full information regarding all the traps on his route. Local traders are being enlisted as local agents and spies of the association, and so long as the police trap lasts the business seems likely to be a good one.

#### KICK OVER FORMULA

London, July 7—The sporting program here, having resolved itself into a succession of minor competitions in the form of hill climbs promoted by local automobile clubs, has generated a large amount of dissatisfaction in the trade, owing to the unreliable nature of the formula upon which the handicap results of these affairs depend. Horsepower is, of course, the central factor in such things, and quite a variety of formulae are in use. Some of these pay no attention to speed of engine, others discard stroke, others again use a variety of fixed factors selected for no cogent reason beyond that they are expected to approximate theoretical and practical results. The effect of all this is that the competitions have been useful only to a couple of firms, who, putting aside the handicap, enter with the idea of making the fastest time and so securing the only advertisement which the general press gives and the only factor which the ordinary motorist can appreciate. An agitation is now being fomented with the idea of formulating these matters and inducing universal acceptance of some set formula for hill-climbing and for the determination of horsepower.

#### PLANS 3,800-MILE TOUR

Paris, July 6—As soon as the European circuit was declared officially off, the Martin came out with the project of a monster 3,800-mile tour around France for tourist cars. The start is on August 2 and each stage is about 180 miles and the closed park system will be employed. The prizes are to be divided into classes as follows: Wheels, consumption, endurance. The first class is open only to makers; the other classes may be entered by any tourist.



THE 1907 FOUR-CYLINDER CADILLAC

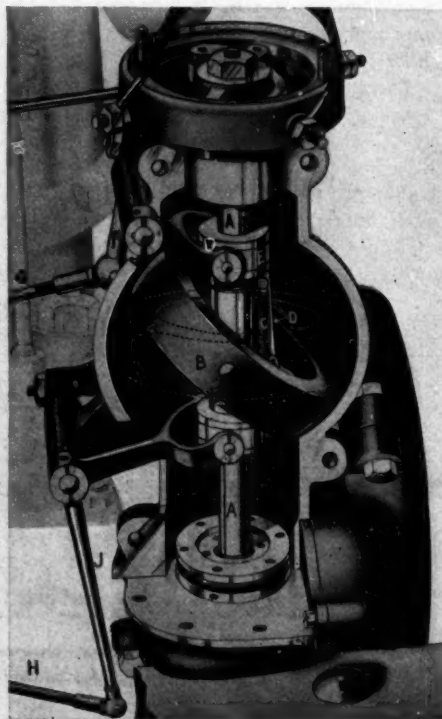


F motor car builders can bank on the old-time proverb that the early bird gets the worm, the Cadillac Motor Car Co. should come in for the lion's share of 1907 sales, for already it is delivering one model of next year's machines. This car, model H, is like all others from the home of this Detroit maker, in that it carries as most conspicuous marks a four-cylinder motor rated at 30 horsepower, with copper water jackets and a three-speed and reverse planetary transmission. The final drive is by propeller shaft. One year ago when the Cadillac people introduced a high-powered five and seven-passenger touring car fitted with a three-speed planetary transmission, many of the trade and hosts of intending purchasers laughed at the project, intimating that the company would soon change and adopt a sliding gear transmission. The passage of time has shown that for cars of 30 to 40 horsepower and for lower powers the planetary gearset is entirely suitable, standing, as it does, the hardest treatment, the maker asserting that of the 10,000 now in use not one has been returned to the factory.

The unique position of the Cadillac people in this regard becomes the more pronounced when it is remembered that theirs is practically the only planetary gearset affording three speeds ahead, and when it is recalled that 40 horsepower used in one model is the highest powered car using such a transmission. Apart from the use of a planetary gearset, that of copper waterjackets for the cylinders is paramount, particularly so in the light that of the scores of makers of cars on this side of the Atlantic but a couple of important makers—the Cadillac and Pope concerns—use this system. Abroad the users of copper waterjackets have been confined to a few firms—their number could be counted on the fingers of one hand—but yet they, like the Cadillac and Pope houses, have been indefatigable in the use of them, claiming marked superior-

ity by their presence. The Cadillac motor has for several years made an enviable record for itself, the little single cylinder runabout showing up remarkably well in races, establishing a strong claim for consistency and reliability. The vertical motors used in the large cars are of similar construction so far as the jacketing is concerned, and while they have not figured in competition, their road reputation is sufficient to warrant placing the mark of perfect approval and satisfaction on the copper jacket.

In the motor, as shown in views of the right and left side, the cylinders are entirely separate. Each cylinder has three essential parts—the wall portion, the head and the waterjacket. The first part, made with an interior diameter of  $4\frac{3}{8}$  inches and with sufficient length for a 5-inch

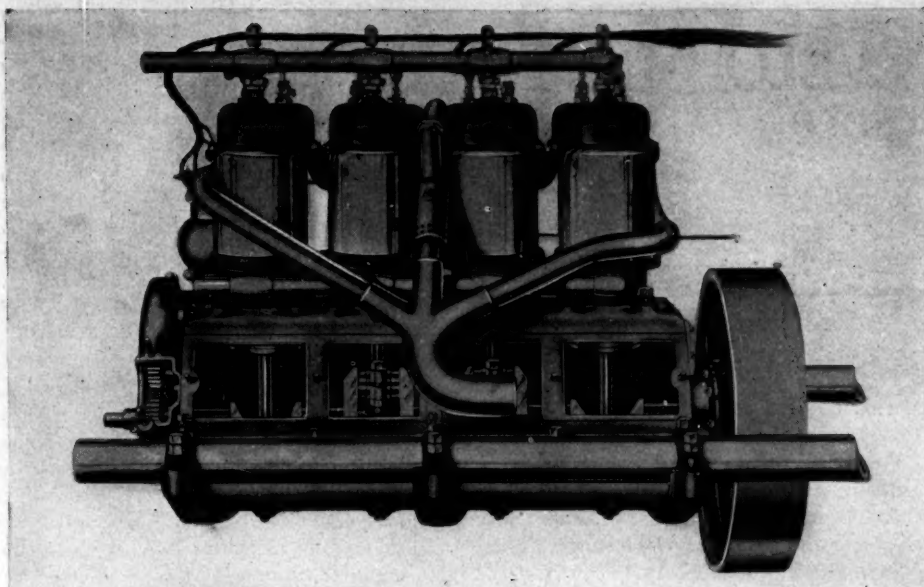


CADILLAC THROTTLE GOVERNOR

stroke, is like all other parts of the motor manufactured in the company's plant, until recently known as the Leland & Faulconer Mfg. Co. and located in another part of the city from the motor car factory proper. Within the last year this factory has been purchased outright by the Cadillac firm and is now an integral part of it. The inside of the wall, or cylinder, part is turned to size and then given a glass finish. The second part of each cylinder is the head, a casting made from the same composition as the wall. Waterjackets are of seamless copper shaped to conform to the exterior of the cylinder, so that when slipped over them they are a neat fit, leaving enough room for the water circulation. On the outside of the cylinder wall, where the bottom of the jacket comes, is an integral flange over which the bottom of the jacket fits snugly. To prevent leakage a steel ring about two one-thousandths of an inch small is forced down over the jacket, clamping it tight over the flange and making a water or gas-tight joint without the presence of gaskets to burn or blow out, or leaded joints to melt. The top of the jacket is arched, as is the cylinder head, and fits between the top of flanged top of the walls and the cylinder head. The cylinder head is held in place by a right and left turn nipple, which threads into the head on top and to the inside of the wall flange at the bottom, thus, as it is tightened, binding the three parts—wall, jacket and head—together. Of the advantages claimed for the jacket by the maker that of the even thickness of the cylinder wall and of the uniform water space surrounding the cylinder is interesting. In this way the outer surface of the cylinder walls can be turned or finished to proper size, leaving an exactly even thickness of metal throughout the entire wall, and so assuring even expansion when the motor is running. To this can be added the advantage of a jacket that will not burst and spoil a cylinder in case of freezing. In favor of a separate cylinder head may be advanced the ease of making repairs in case of a break to any of the three parts, the repair only requiring one new part. The metal used in the walls and head, while containing a lower percentage of phosphorus than found in many of the French and continental castings, flows freely and by tests shows an average tensile strength of 32,000 pounds to the square inch, and often this figure is increased by several thousand pounds.

Both pistons and piston rings, made in the engine factory, show the same careful composition of metals and accuracy of finish. The piston is flat on top, where it carries three eccentric, diagonally cut, compression rings. These rings are of slightly different composition from the piston, containing a higher percentage of sulphur, producing a more springy nature, and possessing greater brittleness. In making these rings a tube of metal is first





LEFT SIDE OF 1907 CADILLAC MOTOR, SHOWING PIPING ARRANGEMENT

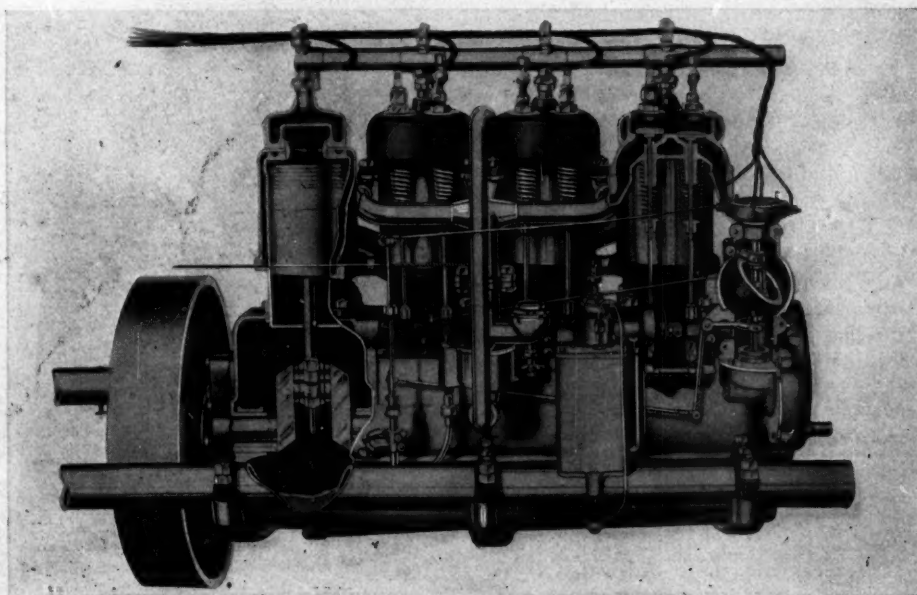
taken, its diameter being slightly less than that of the cylinder bore. This tube is finished on the inside and without, and when finished is cut into rings, each tube making a dozen. Once cut out, the rings are split and given the final touches, which consists in clamping on a lathe where they are ground to exact size. Each piston further carries three oil grooves for distributing the lubricant evenly through the length of the piston stroke. One of these grooves is above the wrist pin and the remaining two at the base of the piston. Connecting rods are steel drop forgings made with an H cross section. In the wrist pin end is a bronze bushing with helical oil grooves, and the cap at the crankshaft end is hinged at one side and held in place on the other side by a bolt with locknut. The crankshaft, that all-important member of the motor, is a steel drop forging, which before used undergoes a tempering process giving it added strength and toughness. Its bearings surfaces, five in all, two long ones at the ends and the others between each two adjacent cylinders, are ground to size. Each bearing is a bronze grid filled with a babbitt preparation. In making the crankshaft as accessible as convenient, four inspection ports are carried on the left side, and through these the connecting rods can be adjusted as well as the bearings of the crankshaft. The crankcase is an aluminum casting made in two parts, an upper and lower, each divided into four compartments for each crankthrow. The crankshaft bearings are carried between the two halves. The entire motor takes its support on a couple of heavy steel tubes, which are in turn supported on pressed steel cross members of the main chassis frame.

The valve opening and closing mechanism calls into service a single camshaft, placed on the right side of the motor, on which side of each cylinder head is an expansion or valve chamber in which the

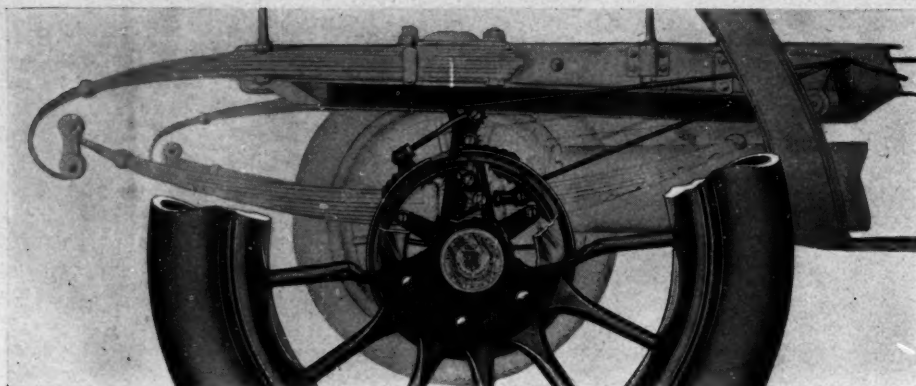
inlet and exhaust valves are carried side by side. Both are opened from the same camshaft through the use of vertical lift rods of hardened steel. Near the bottom of each lift rod is a clamping nut through which the lift of the valve can be varied. The bottom of the rod rests in a depression in the top of a metal block carrying a roller for bearing on the camshaft. This block works in iron guides. Cams are of hardened steel. All gears, including those operating the camshaft and water circulating pump, are accurately cut by special machinery and encased in dust-proof housings.

In the mixture supply system and the ignition scheme, both of which are so closely related, a good system of speed control centers. Ignition is by the accepted jump spark system, with current coming from either storage or dry cells, with either for reserve purposes. Spark plugs are carried in the caps above the valves and on the dash of the car is a

quad coil. The governor, which is the main agent in regulating the crankshaft speed, merits attention because of its novelty in motor car practice and, further, because it is made in the Cadillac motor factory. The illustration best shows its design. It is mounted at the right front of the motor, almost entirely ahead of the front cylinder, and takes its drive by spur gear from the camshaft. The vertical shaft A, running on ball bearings at top and bottom, is driven by these gears, its own gear being housed in the same casing as the gear meshing with that on the camshaft. Instead of centrifugal governor weights is used a governor ring B, which normally rests in the angular position, as shown; but as the motor speed increases, causing the shaft A to revolve more rapidly, the ring B assumes a position approaching the horizontal, as indicated by the dotted lines. This tendency is partly opposed by the tension of the small spiral spring C shown to the right of the shaft A and seen above the right half of the ring B. The tension of this spring C can be varied, at the driver's will, from the steering wheel of the car, the connection for such being through the connecting link H, a portion of which is shown, the arm J completing the connection. As the ring B approaches the horizontal position on high motor speeds it raises on the link D, which, being attached to the collar E, raises it. The collar has connection through the arm F and the rod G, which act partly closes the throttle, thus reducing motor speed. By this governor the motor speed can be maintained constant at any desired point. Should a low speed be needed the tension of spring C can be so small that the centrifugal force has but to overcome the weight of the ring B in bringing it to the horizontal, which would mean a low speed. But supposing considerable tension is put on the spring, then before the ring B becomes horizontal the centrifugal force has to overcome the



SECTIONAL VIEW VALVE SIDE OF THE 1907 CADILLAC FOUR-CYLINDER MOTOR



REAR SPRING AND BRAKE CONSTRUCTION ON 1907 CADILLAC CAR

weight of the ring B and the tension of the spring. Carried on the top of the governor shaft A is a LaCoste commutator, which, while closely connected with the governor, is not in the least affected by it. Some readers may imagine that because of the commutators being mounted on the governor shaft the governor acts on the spark, advance and retarding it. This is not the case. The governor action is on the carburetor throttle only, and any advance and retard of the point of ignition is accomplished from the steering wheel by a finger lever. The connection from this with the ring of the commutator is partly shown, the top rod at the left in the governor illustration being the one. In case of emergency, when an immediate increase of speed is wanted, the governor can be cut out by an accelerator pedal in the footboard, the depressing of this pedal opening the throttle to any desired extent. This accelerator has no connection with the finger lever on the steering wheel, and immediately it is released the motor speed returns to that limit set by the governor.

In the right side illustration of the motor is shown the lubricator, placed on the side of the crankcase and opposite the space between the first and second cylinders. The oiler is a cubical vessel provided with a single plunger pump operated from one of the valve lifting rods through the intermediary of a pump arm with an eyehole through which passes the valve stem. A single lead from the oiler leads through a sight glass on the dash and from there to the rear compartment of the crankcase, it being recalled, as stated in the motor description, that the case is divided by cross partitions into four compartments. From the rear compartment the revolving of the crankshaft splashes it into sloping troughs on the side of the case, which carry it forward from one compartment to another until the forward one is reached. All surplus oil in the front compartment drains into the rear one. In the end bearings of the crankshaft are oil recesses from which the oil, after flowing through the bearing, returns to the crankcase, thus preventing it dripping out of the end of the bearing onto the ground or into the car apron.

Within the crankcase is a perfect splash which fills the piston oil grooves and so reaches the cylinder walls. The oil receptacles on the top of the connecting rod bearings are also filled in this way.

The Cadillac muffler, the same as used for some time, is a twin affair, consisting of a pair of cylindrical chambers placed side by side towards the rear of the chassis. Each cylinder or chamber is 30 inches long with a 6-inch diameter, and both are absolutely free inside from perforated baffle plates or other obstructing mediums or agents. The muffling is by opposed currents of the exhaust gases, which are brought about by having the gases enter the end of one cylinder and exit into the next chamber through an opening surrounding the intake. From the first cylinder they pass into one end of the second through a fairly large opening, and have to leave this cylinder through a smaller opening formed concentrically within the intake. In this way the gases entering each cylinder are opposed by those leaving it. A cutout is provided in the first cylinder, so that with it in use the exhaust has the benefit of expanding in the chamber and then exiting unobstructedly from the opposite end.

Leaving the motor and passing to the

transmission system, the first novelty is the use of a friction clutch within the flywheel. Where planetary gears are used a flywheel clutch is not necessary, but the Cadillac concern has installed a unique design of clutch, by the use of which the motor can be running and the transmission idle. The cast iron flywheel is turned out hollow on the rear face, providing ample space within it for the clutch. In the transmission illustration, showing the clutch in section, the flywheel, the heaviest member, appears at the right with a peripheral flange or rim extending to the left. At the left side of the flange is a split washer, or ring, set into a groove in the flywheel rim, much as a retaining ring in a ball bearing. The presence of this ring gives practically a hollow flywheel, and within the space are two leather-faced disks, one bearing on the interior of the flywheel at the right and the other against the inner surface of the ring at the left. A set of coil springs forces the disks apart from each other and in contact with their respective parts of the flywheel. When the clutch is being put together a total tension of 800 pounds is impressed upon these springs, with which pressure they force the disks into engagement. When releasing, the disks are forced towards each other through the two ball-bearing collars shown to the left of the outer disk. At the back of these collars are wedge-shaped surfaces, so that by rotating them in opposite directions the collars are forced apart, and as the outer collar is connected through a sleeve with the inner or right-hand disk, the disk is forced to the left. To the left of the outer collar is shown an adjustable screw with locknut, by which the tension of the clutch springs can be adjusted. The operation of the clutch is through the usual style of pedal mounted on a cross shaft.

To the left of the clutch in the illustration is shown a part sectional view of the planetary transmission. The three forward speeds and the reverse are all controlled by one lever, carried on the right side of the car adjacent to the driver. All of the gears are continually in mesh and all run in an oil bath. One and all of them are accurately cut by special machinery, after which they are hardened, and when in use run on bronze bushings. In changing speeds on this car it is not necessary to disengage the flywheel clutch, a single movement of the change speed lever being sufficient. There is no possibility of two sets of gears being brought into operation at the same time. The Cadillac type of gearcase construction is such that the internal gears are brought into use only when extreme power is needed. On the third speed drive is direct, the entire gearset being locked in position, and the case with all of its gears revolving dead as an additional flywheel. The mainshaft supporting the gearset revolves on Hess-Bright ball bearings, the rear bearing having its location just out of the gearcase



CADILLAC STEERING GEAR

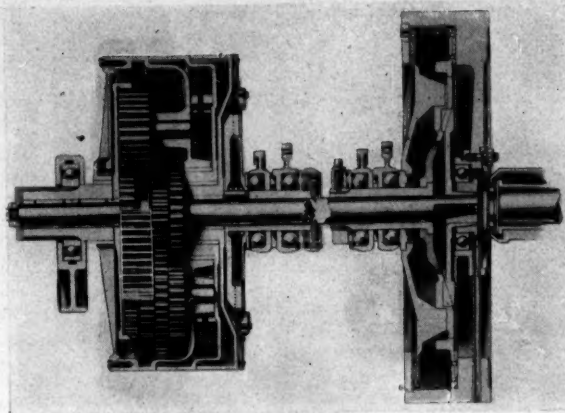


and the forward bearing resting within the flywheel. The gearset case has three drums, with the usual leather-faced contracting bands for gripping each. These are for the two slow forward speeds and the reverse. In the direct drive a high-speed disk forced against the outside of the transmission case locks all of the gears within it so none of them rotates on its axle.

Drive from the gearset to the road wheels is best followed by the illustration showing a portion of the propeller shaft and depicting the differential case in section, as well as parts of one of the brake drums. The driveshaft has a couple of universal joints, that adjacent to the differential being of the double-knuckle type, the friction surfaces of which have their bearings in bronze bushings caps. Oil is copiously provided and dust excluded. The forward joint is of the ball and socket design, with the socket somewhat elongated to provide for the slightly variable distance between the axles, caused by the up and down motion of the springs. Ball and socket are case-hardened steel, with provision made for packing with lubricant.

In the live rear axle the driveshafts to the wheels and the bevel pinion for transferring the drive from the propeller shaft to the differential are carried on Hess-Bright bearings, there being two of these for the short pinion shaft. The entire axle parts are encased in a large aluminum casting made in a couple of parts, bolted together on a slight angle. The part inclosing the differential is of globular design, stiffened by four heavy webs extending along the sleeve portions to near the inside of the spring seatings. Within this casting is the floating type of axle. The driveshafts are inclosed within a steel tube within the outer casing, and on the ends of this steel tube are supported the Hess-Bright bearings in the road wheels. These bearings are in direct line with the spokes of the wheels.

In the running gear of the car, including the front axle, framework, steering gear and brake mechanism, the same attempt at careful and fool-proof construction as shown in the motor and gearset is exhibited. The front axle is a steel tubing carrying drop forged steering knuckles. Each front wheel revolves on two races of Hess-Bright balls, the larger set of balls being in line with the spokes, giving a perfect bearing. In the steering gear illustration K shows the gearcase rigidly attached to the main frame of the car. The yokes, or jaws, L, are keyed to the rocking shaft M, provided with bearings in the gearcase at N. The in-



CADILLAC THREE-SPEED PLANETARY GEARSET

clined steering staff is at its lower end threaded into the nut, or sleeve, O. A turn of the wheel causes the jaws, with the rocker shaft M, to swing on bearing N, which movement moves the arm P backward or forward, according to the direction of movement moves the arm P backward or forward, according to the direction of movement of the steering wheel. The threaded sleeve O is divided crosswise and its trunnions have their bearings in the blocks S. Should the threads on the nut O wear, provision is made for adjustments by turning the screw T, which clamps the ends of the yokes more closely together and with them the threaded sleeve. The opening U in the steering gearcase affords access to the adjusting screw.

Two sets of brakes control the retard of the car's speed, both of which sets operate on drums on the back hubs, one set expanding within the drums and the

other consisting of clamping bands, which grip the outer surface of the drums. The contracting set is pedal-applied, while the expanding ones are engaged by lever at the driver's right. By the application of either set the main flywheel clutch is disengaged, freeing the motor from the car. Remaining points about the running gear are semi-elliptical springs in front, with three-quarter elliptics in rear; 102-inch wheelbase; 5 6½-inch tread tires measuring 32 inches inside diameter, with 4-inch air chambers, and typical pressed steel frame construction. Model H chassis carries a five-passenger body of standard lines. The hood has a plain top and gilled sides; the dash is of the curved metal style; front and rear fenders are joined by a running board on which rest the battery boxes; side doors are of the rounded corner style, with simple scroll design at the lower front corner; and seats with upholstery are of medium height and good width.

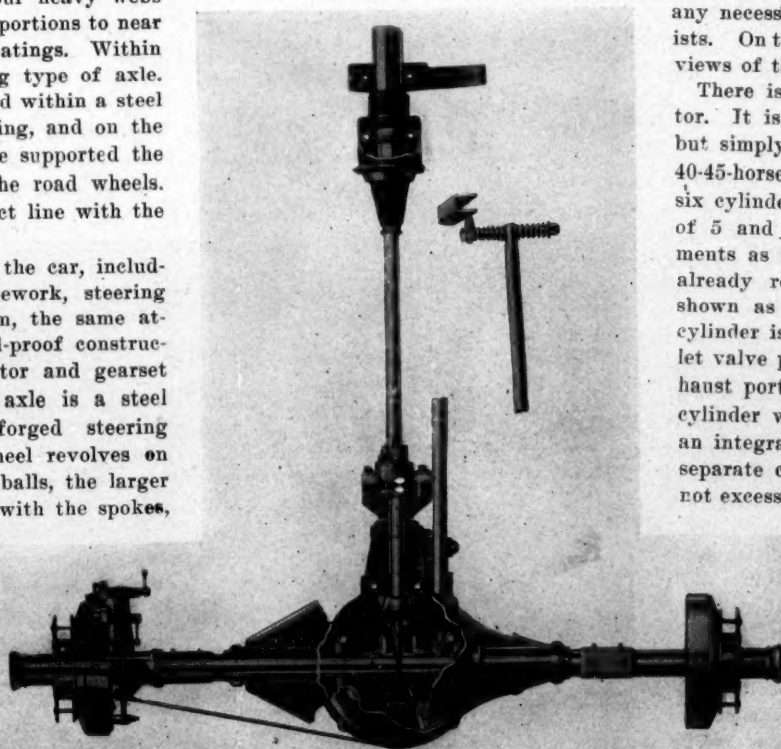
#### SIX-CYLINDER PIERCE

During the week of the New York automobile shows last January Motor Age learned for the first time of a six-cylinder car that was being built by the George N. Pierce Co., Buffalo, N. Y. During the spring months little was heard of this new member of the Pierce family, but with the start of the Glidden tour from Buffalo last week it suddenly loomed into the motor sky, not as an entrant in the tour, but as a rear guard car, starting each day after the competitors of the tour were well under way and picking up the checkers at the several stations en route and lending any necessary assistance to disabled tourists. On the two following pages are shown views of the motor and one of the car.

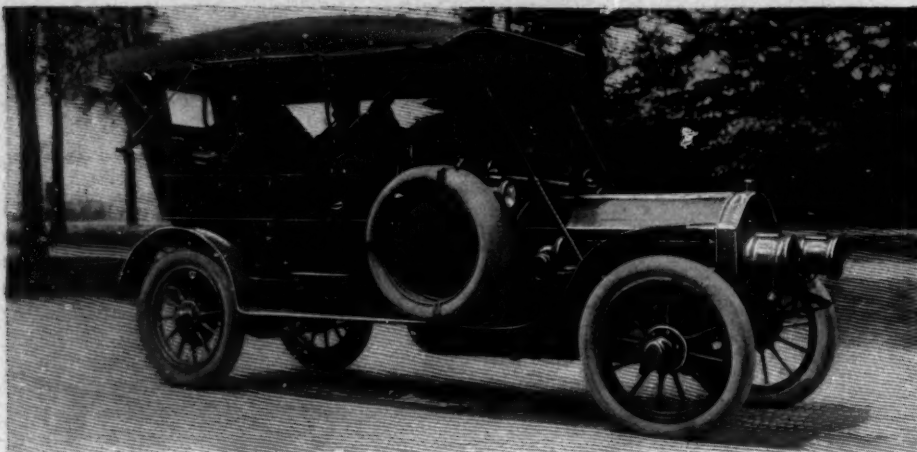
There is nothing radical about the motor. It is not one with untried features, but simply an enlargement of the present 40-45-horsepower Pierce motor, possessing six cylinders, each with a bore and stroke of 5 and 5½ inches, the same measurements as in the present four-cylinder car already referred to. Under test it has shown as high as 72 horsepower. Each cylinder is a separate casting, with an inlet valve port on the right side and an exhaust port opposite. These ports and the cylinder wall, waterjacket and head form an integral casting. Owing to the use of separate castings the length of the car is not excessive, the wheelbase measuring 133

inches, not materially longer than many of the continental four-cylinder cars, although placing a high-water mark for wheelbases of American-built machines.

Supplying fuel to the six cylinders, always a debatable problem with this number of cylinders, is a large



DRIVE SHAFT, TORSION ROD AND DIFFERENTIAL ON 1907 CADILLAC



THE NEW SIX-CYLINDER PIERCE GREAT ARROW

size Pierce carbureter, of the same design as that in use on the four-cylinder cars. But little of this mixer can be seen in the motor illustration, that of the right side showing but the circular end of the horizontal throttle located opposite the space between the third and fourth cylinders. The carbureter is carried slightly lower than this and the small curved tube entering the top of the float chamber passes to the dash, where it terminates in a rubber bulb used for priming, the driver being thus able to manipulate it from the seat. Immediately above the throttle the induction pipes branch, one to the front three cylinders and the other to the rear three. These branches have pronounced expansions where the first branch commences, the apparent object being the elimination of a sharp turn for the gases reaching the third and fourth cylinders. Passing these cylinders, the branch connects with a continuation pipe to the two end cylinders, this continuation being of smaller diameter than the branch proper. A slightly down and in curve is given the latter half of the continuation. Throttle control rests with a finger lever on the steering wheel. Gasoline feed to the carbureter is by exhaust pressure, the tubing taking the pressure from the exhaust pipe to the gasoline tank being shown in the left side of the motor, where it taps the main exhaust pipe beside the back cylinder.

Ignition is by jump spark with current from double sets of storage cells. The primary current passes through a six-point commutator carried on the top of a vertical shaft rising between the fifth and sixth cylinders and driven by bevel gears off the inlet camshaft. Spark plugs are inserted horizontally in the right side of the inlet ports, the wires to them being carried from the six-part coil on the dash through a tube above the cylinder heads. Spark change is from the hand wheel.

In oiling, a system common in Pierce construction is adopted. On the left side of the motor, well above the tops of the cylinder, is carried a long oil tank. The bottom of this tank slopes gradually from the two ends to the center, where the six

leads leave it. Of these six one passes to a gauge on the dash by which the driver can at any time discover the amount of oil in the reservoir. From this tank oil feeds by the remaining seven leads to the seven bearings of the crankshaft. From these main bearings it passes through the bored crankshaft and is by centrifugal force delivered to each of the several lower bearings of the connecting rods. In the base of the crankcase a splash is maintained which furnishes the oil quota for the cylinder walls and the wrist pin bearing. In the base of the crankcase is an oil well in which is a plunger pump, which after the oil is strained through gauze returns it to the tank, to be used again.

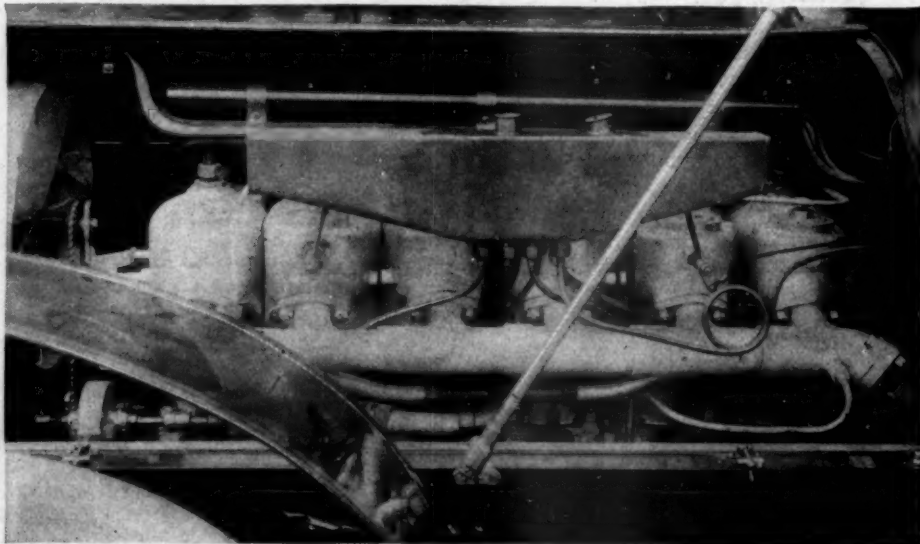
In the water-cooling system an eccentric pump—the same as used this season, but larger—is carried on the left side of the motor opposite the forward cylinder. It is on a separate shaft, gear-driven off the halftime gear. From the pump the water passes to a two-way union between the third and fourth cylinders, where it divides, passing to the several jackets and entering each immediately beneath the exhaust valves. The return flow is from the center of the cylinder heads to the radiator top. Assisting the water is a rope-driven fan carried close to the rear of the

cellular radiator, forming the bonnet front.

Transmission from the motor is through a leather-faced cone clutch and a three-speed and reverse sliding gear transmission, the drive being direct on the high speed. Final transmission is by propeller shaft with universal joints. In the motor plain bearings carry the crank and cam shafts, but in the transmission set, back axle and four road wheels Hess-Bright ball bearings are invariably adopted. Wheels are 36 inches in front and rear and in front carry 4½-inch tires with those on the back wheels 5 inches.

As to what speed this new member of the American six-cylinder family will make it is not definitely known. Word comes from the factory that it has already shown a 68-mile rate. The contestants of the Glidden tour have already reported some rapid traveling on its part.

The body can be recognized as coming from the Pierce factory, though it possesses a few lines and curves at variance with those of the four-cylinder model. The radiator front, although similarly arched on top, is without the heavy brass border and the starting crank is immediately beneath its center instead of several inches lower as previously. Gills are absent in the bonnet sides, but the dash is of the present hollowed style. The body indulges in straight rather than curved side lines, although curves abound at the back corners. In the tonneau is seating space for five, making the car a seven-passenger vehicle. Control vies with present practice, particularly in the placing of the change speed lever on the steering wheel, a practice long used abroad by the Darracq house and for years adhered to in America by the Pierce people. The front axle is a forging made in I-section and having a uniform downward arch between the spring seatings. Springs are four semi-elliptics, the rear pair thrown outside of the frame pieces. Fenders follow the curvature of the wheels very closely in case of the rear ones, but not so closely with the fronts. They are continu-



EXHAUST SIDE OF SIX-CYLINDER PIERCE

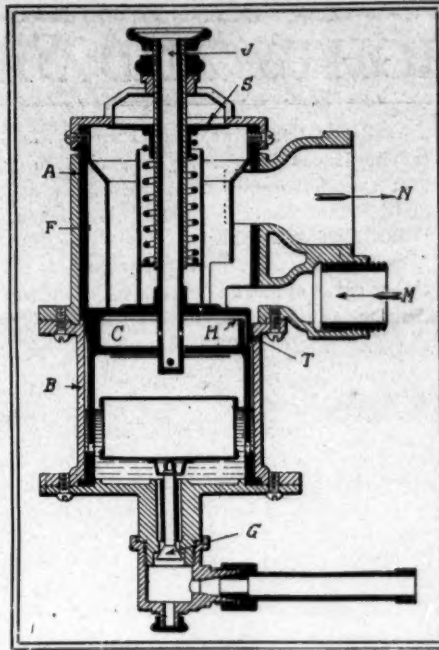


ous with the running boards and have mud flaps between them and the car body.

It is the present intention of the Pierce company to build upwards of fifty of these machines, the big Pierce leader for the coming season of course being the four-cylinder car, the details of which have not as yet been made public. Six-cylinder cars are at present a luxury with American owners, but tests of English makes have shown that the increased flexibility in the six-cylinder motor is a boon not gained in four-cylinder models.

### MALEZIEUX'S CARBURETER

In this day when every maker of gasoline engines and motor cars is exploring the carbureter field to obtain a mixer competent for the varying speeds and loads, and yet not too extravagant in fuel consumption, little deviation has been noted in the method of pulverization of the gasoline, it in most cases exiting from a tipped nozzle to be sucked up by a current of passing air and mixed with it in its passage to the cylinders of the motor. The Malezieux carbureter, a French invention, coming from the house of Malezieux, 61 Strasbourg boulevard, Paris, possesses an entirely novel method of carburization the generally considered indispensable nozzle being relegated and a port scheme substituted. From the cross sectional view three distinct parts appear—an upper chamber A, in ordinary phraseology known as the mixing chamber; a lower compartment B housing a cork float and termed the float chamber, and an intermediate space of small size designated by the letter C and for all intents and purposes termed the corridor of the carbureter. The entering air has three doors or openings. At the top J marks a general opening, its passage being through a long vertical tube with small ports at the bottom of the tube for the escape of the air into the corridor. In the base of the mixing chamber at M is a fair-sized entrance for hot air; G marks a spring-controlled valve in the top of the mixing chamber and in general



MALEZIEUX'S CARBURETER

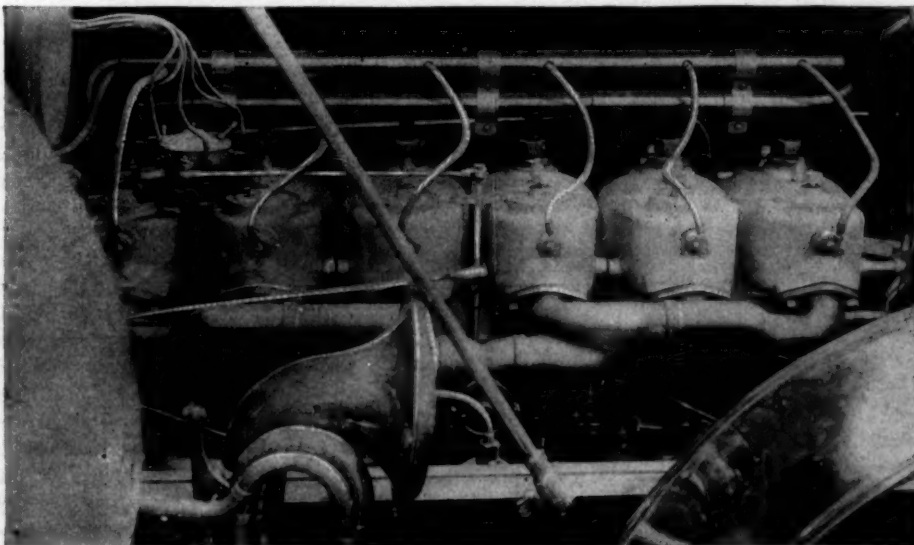
termed by American makers the auxiliary valve. Gasoline finds its way to the float chamber by way of the opening G at the bottom of the float stem. Mixture passes to the motor by entrance through the exit N.

Now for the pulverization. Two walls encircle the float, forming the float chamber. Of these the inner one has a series of openings or ports near its bottom which permit the gasoline entering the circular space separating the two walls. In this space the gasoline stands at the same level as in the float chamber proper. Within the mixing chamber A is a lining F practically filling the entire chamber and this lining is free to turn as the throttle in every carbureter. On a suction stroke of the motor air in the mixing chamber A and the corridor C is exhausted by the way of N, the passage out of the corridor being by passage H down by the side of T an extension of the lining F then around the

bottom of T and up on its other side, thence to the mixing chamber. The air in rounding the bottom of T sets up considerable suction which acting on the gasoline in the circular space between the two walls of the float chamber breaks it up, sucking a portion of it along and mixing with it as it passes to the motor. Hot air entering through M prevents any condensation of the mixture while passing through the mixing chamber or pipes to the motor. Auxiliary air through the spring-controlled valve G enters on high motor speeds, at which time the suction on the gasoline is not abnormal owing to this extra air supply not passing the passage H, thus exerting suction on the gasoline. In controlling the motor speed revolving the lining F through a part revolution on its vertical axis accomplishes several results: First, the relative size of the opening H is increased or decreased. At the same time the dimension of the hot air passage M is correspondingly altered as is that of the exit opening N to the motor. Readers must realize that the opening H between the corridor and the mixing chamber is practically a ring, one extending almost entirely around the top of the mixing chamber except at that point where the lining of the float chamber attaches to the outer wall. Owing to this large opening and the comparatively thin wall of gasoline between the two walls of the float chamber, the suction of the air escaping from the corridor has a pronounced breaking-up effect on the gasoline, alcohol or oil.

### A TWELVE-CYLINDER CAR

In manufacturing the Maxwell twelve-cylinder racing car the Maxwell-Briscoe Motor Co. discovered that the opposed horizontal cylinder type of motor is most necessary, because a car with twelve vertical cylinders would be so long as to be impracticable. In effect the maker believes, outside the fact that it is most necessary from an engineering standpoint to construct the twelve-cylinder motor with horizontal cylinders on account of its compactness, that this car will demonstrate that the horizontal motor is fully as efficient as the vertical type when made with that care and attention to detail that the Maxwell cars are known to incorporate. The twelve-cylinder and the eight-cylinder cars both incorporate the Maxwell principles throughout, having the three-point suspension, engine and transmission in one unit, thermo-siphon circulation of the cooling water, and driveshaft with the Maxwell type of axle. This style of opposed motor with the cylinders carried crosswise and the crankshaft placed longitudinally allows of the use of a twelve-cylinder motor of length but little greater than that of a six-cylinder engine of the vertical type—a fact due to the six cylinders on one side of the crankshaft being almost opposite to the six on the other side. The horizontal motor further enables the builder to carry the back cylinders well beneath the footboard.



INLET SIDE OF PIERCE SIX-CYLINDER MOTOR



# LEGAL LIGHTS AND SIDE LIGHTS



## DAYTON HAS THE FEVER

Automobiles may be compelled to move through the streets in the central portion of Dayton, O., at a snail's pace in the future. At least that's what the motorists would call 4 miles an hour. But there are two "ifs" hanging on the proposition, and maybe more. The speed limit may be lowered if the council committee now considering an automobile ordinance so recommends and if the council passes it. Some time ago an ordinance in rough form was introduced in council by Mr. Sixsmith, given its first reading and referred to the trustees of the Second ward and to the city solicitor. By the terms of this measure all vehicles are required to keep religiously to the right when making crossings where car tracks intersect. The phrase "intersection of tracks" apparently was inserted in order to confine the operation of the ordinance to the downtown district. Before the ordinance is reported back to the council a little embellishing will be done. Like ordinances in vogue in other cities are being gone over and provisions deemed good will be incorporated in the ordinance for governing speed in Dayton. The speed limit on the busy downtown streets may be reduced as low as 4 miles an hour, it is said. This low rate, if it is fixed, will apply only to the central portion of the city. Away from the hum and bustle of traffic the motorist will be permitted to hit up a faster clip.

## JERSEY MEANS BUSINESS

Owing to the cosmopolitan character of the population in Atlantic City, N. J., especially during the summer season, local officials have been somewhat lenient with automobilists, who, since the first of the month, when the new law went into effect, have been allowed to do pretty nearly as they pleased. It was felt that this class of patrons was needed here, and that conditions should not be made too severe for them. On Tuesday week, however, State Commissioner of Motor Vehicles J. R. B. Smith dropped into town, and immediately things underwent a change. He made it understood that each owner and operator must have a license, that each car must be properly tagged, that the speed restrictions must be observed, or wholesale arrests would follow. Orders were immediately issued to the police and announcements made in the local press that the new law must be observed to the letter. Each cop was provided with a vest pocket edition of the law and told to study it up. The effect was immediate. The office of the local agent of the motor vehicle department was besieged by owners and chauffeurs who had "forgotten" to register, and a marked let-up in the speeding evil became apparent at once. Commissioner Smith went further. He dropped

a veritable bomb into the camp of the local bonifaces by calling attention to the fact that but one of the more than a score of big hotel motor buses had been licensed. "Smithy" was besieged by the hotel keepers, who wanted to prove to him that their cars operated exclusively between the depots and the hotels, entirely within the city limits, and should therefore be immune. He read the law to them, and said that unless every last one of them complied with its provisions within 24 hours he would impound the machines and arrest the owners and drivers. The bonifaces at once got into the line waiting to buy licenses, for it was evident that "Smithy" meant business. The commissioner's next move was to post men at the Meadow boulevard entrance, where an average of 250 machines enter the city daily, and gave the watchers positive orders to arrest every driver and owner who cannot show proper credentials and registration. It's going to be a hard summer for any automobilist who attempts to invade the "sacred soil" without the necessary "Open, Sesame!" in his inside pocket.

## VIRGINIA'S LAW

A new automobile law has gone into effect in Virginia. The law is a state act, which applies to any county whose board of supervisors adopts it. Every owner or driver must register his car with the secretary of the commonwealth before running on any street, road, alley, highway, avenue or turnpike. A number plate with large letters must be on each machine. The plate and fee cost \$2. A white light visible at least 100 feet must be displayed at night. The speed is limited to 12 miles in town and 15 miles in the country, except in rounding curves and corners, where it must be less. Cars are required to slow down when passing a horse vehicle. Every machine must be provided with lock and key and no driver may leave it standing unattended unless securely locked. If any section of the act be violated the person so doing is liable to a fine of \$10 to \$100 and imprisonment from 5 to 30 days. Besides, the violation of any section is liable for any damage inflicted.

## NEW SCHEME IN OHIO

Many automobile tourists traveling between Toledo and Cleveland last week fell victims to a new scheme for capturing scorchers, devised by the town authorities of the village of Perrysburg, which is located on the Perrysburg pike, the main east and west highway. Two telephone poles swinging from posts and two telephones made possible the arrest of many unwary scorchers. The town officials rigged up a private telephone line over a measured course of half a mile, and with the accuracy of a timer timing a road race

the man at one end of the line notified those at the other that an automobile was approaching at apparently undue speed. When the machine crossed the tape the fact was announced and stop watches were set at the other end. If the machine reached the finish too soon for the prescribed rate of 10 miles an hour—and it usually did—the telephone pole was dropped and the offending driver was invited to dismount. Court was then held under a spreading tree and fines ranging from \$15 to \$50 were assessed. Last Sunday the business was conducted on a wholesale scale and it netted the town a very handsome sum.

## QUAKER TRADE WILL FIGHT

That the too rigid enforcement of the automobile law by overzealous officials is bound to have a deleterious effect upon the trade has long been the opinion of Philadelphia dealers and agents; but recently the arrests and punishments have become so numerous and so aggravating, in the suburban sections especially, that the Quaker city tradesmen have become alarmed, and last Wednesday week they took the initial steps toward combating the evil. On that day there met at the Hotel Majestic over a score of men representing the Rambler, Winton, Knox, Locomobile, White, Acme and Ford agencies and branch houses, the announced object of the gathering being "an effort toward bringing about a modification of the existing automobile laws." A temporary organization was effected by the election of George H. Smith, of the White garage, president, and I. J. Morse, of the Locomobile branch, secretary. It developed that the persecutions of even the most law-abiding and careful drivers are becoming so frequent that not a few conservative owners have practically given up the sport and others are threatening to do so. A suburban town may pass a ridiculously inadequate speed ordinance, and knowing they have the operators "on the hip," enforce the law to the letter, while trolley cars, horse-drawn teams and bicycles are allowed to bowl along the streets unmolested at rates of speed greatly in excess of the limit. The constables well understand that the average automobilist will not haggle over a \$10 fine plus the costs, and rather than lose time and put himself to a great deal of trouble the unfortunate owner hands over the money and proceeds on his way. No defense is tolerated by the magistrate; any testimony but that of the officer who made the arrest is superfluous; it's a case of pay or go to jail. Now and then the officers catch a Tartar who will fight rather than be imposed upon; but as such a method means a tenfold increase of the expenditure, a long delay, little satisfaction and no permanent



good results, it is not often adopted. The new organization proposes, at its very next meeting, to organize permanently and adopt a constitution and by-laws. At this meeting at least a score of local establishments and both clubs will be represented, and steps will be taken at once to organize automobilists throughout the state in the effort to bring about the enactment of a uniform law throughout the commonwealth, which can be easily understood and equitably administered. The Quaker tradesmen are in earnest, and have already taken steps to get into communication with every owner of an automobile in the state of Pennsylvania.

#### BISONS UP IN ARMS

William H. Hotchkiss, of Buffalo, president of the New York State Automobile Association, has taken issue with Superintendent of Police Regan and has declared the latter has no right to attempt to restrict the speed of automobiles upon any of the streets of Buffalo to 5 miles an hour. Mr. Hotchkiss drafted the present motor vehicle law of the state when he was chairman of the state association's committee on legislation, and he asserts that under that law automobilists have a right to travel 10 miles an hour. He says: "We realized that at times there would arise in localities prejudice against motor-

ists, and we sought to make this law such that it would prevent oppression during the reign of prejudice. The present outbreak in Buffalo has followed accidents in which speed did not figure, and there is no sense at all in holding motors down to 5 miles an hour. A man can walk nearly that fast, and it is absurd to compel automobile drivers to travel at such slow pace." Mr. Hotchkiss contends 10 miles an hour is safe speed.

#### WANTED DRIP PANS

Automobile men of Buffalo are highly amused at a proposed ordinance which came before the board of councilmen of that city last week requiring motorists to carry drip pans under their machines to catch grease. The ordinance was laid on the table to give the corporation counsel time to examine the state automobile law and determine the city's rights in making an ordinance of that kind.

#### NOW AFTER LIGHTS

Having put into effect a police regulation prohibiting the excessive blowing of horns and the use of sirens on automobiles, the commissioners of the District of Columbia are now framing a regulation forbidding the use of dazzling lights on automobiles within the city limits at night. There has been much complaint about the

lights on automobiles and the commissioners have come to the conclusion that they can curb their use as easily as they did the excessive blowing of horns. In this crusade they have the support of many automobilists.

#### SPEED LAWS CONFLICT

It has been decided by Judge Thomas Whallon of the Indianapolis police court that the city speed ordinance is inoperative because of the state law passed recently. The former fixed a maximum speed of 12 miles an hour and the latter a speed of 15 miles an hour. In a crusade conducted by Chief of Police Metzger last week ten drivers were arrested under the city ordinance. They were released after Judge Whallon announced his ruling on the speed ordinance.

#### ORDINANCE INVALID

The discovery has been made that under the New York law governing the operation of automobiles a municipality has no right to tax automobiles. This means that the vehicle ordinance recently reported by the aldermanic committee on ordinances will be sent back to the committee for consideration, with the corporation counsel as an adviser. In this ordinance the committee having the matter in charge proposed to tax automobilists \$5 a year.

## THE READERS' CLEARING HOUSE

#### COMPLAINS OF RECKLESSNESS

Chicago—Editor Motor Age—Sunday last I made a tour of the south side parks for the purpose of satisfying myself if all that has been said about reckless driving is true. I am compelled to admit it is, though I had not believed it before. There are some 4,400 automobiles registered in Chicago, and I think all of them were out on the south side Sunday. Of this 4,400 I believe there may have been 300 or 400 drivers who could properly be placed in the sane class; the rest had an utter disregard for anything. I have an accurate speedometer on my car and drove pretty close to 15 miles an hour for some 3 hours. The police did not seem to think this at all excessive, for not one paid the least attention to me. There were a couple of machines that I passed, but they were stalled along the roadside for one reason or another. If there were any that did not pass me they must have been horrible examples of junk, for, comparatively speaking, I crawled along. The way some of the big cars passed me made me imagine I was going the other way, yet my speedometer showed nearly 15 miles an hour, and the odometer tallied with the length of time out. I have come to the conclusion that automobilists do not know the first rudiments of the law of the road, for such a cutting in on the wrong side I never before noticed. I must admit I saw

no accidents, but my hair stood on end more than once. Would it not be a good plan for each dealer selling a machine to hand the purchaser a set of rules embodying the rules of the road that have been recognized as laws for years and years? Possibly some of the automobilists would have enough regard for the rights of others to follow them to some extent and thereby do away with part, at least, of this needless recklessness.—E. H. G.

Most drivers know the rules of the road; they all know the speed limit. This is an age of the swift, and it would appear to be almost impossible to alter affairs. The trouble is not with the drivers; it is with the police. In New York there are enforced most rigid rules covering what have been laws of the road for years. The Chicago police and the park police pay no attention to this point, preferring to attempt to regulate speed alone. If there were due regard for the law of the road there would be a slackening of speed. When the city and park authorities get together and adopt such regulations as are in force in New York and Buffalo much of the complaint and possibly some of the accidents will cease, but not before.



#### USE OF STEEL TIRES

Crawfordsville, Ia.—Editor Motor Age—I would like to know what effect steel tires will have on the motor and running gear of an automobile if very elastic springs are used and the car is driven from 15 to 25 miles an hour. Not considering traction, would steel tires of about 36 inches diameter shake the motor and running gear too much while traveling on dirt roads?—C. M. S.

It is generally admitted that there is nothing to equal pneumatic tires so far as the matter of ease on the running gear of an automobile is concerned; next comes some form of cushion tire, then the solid tire. In the case of the pneumatic the air and rubber absorb much of the vibration caused by road inequalities, yet the chassis receives some pretty severe jolts in spite of these absorbing elements. If it is desired to use steel tires it would be wise to adopt some of the many spring cushion tires that have been brought out. Comparatively satisfactory tests of such wheels were recently made in Paris, but the speed was materially cut. It is pretty safe to say that if steel tires are used on a car driven 25 miles an hour there will not be much of the car left in a little while. Dirt roads will not save the car much, for the going will be so hard as to more than offset the little roughness to be found on macadamized roads used by automobiles.



NEARING THE SUMMIT OF THE ROAD BETWEEN CAMUY AND AQUADILLA

**P**ORTO RICO, located 475 miles east of the island of Cuba, has of all the West Indies proven one of the most fruitful fields of motor bus service. The island measures but 100 miles in length, east to west, with an extreme width of 40 miles, and yet in this small area of 4,000 square miles, or  $2\frac{1}{2}$  million acres, there is nestled over 1,000,000 people, of all colors, religious denominations and habits. Being located but 18 degrees, 1,260 miles, north of the equator and entirely within the tropics, it is a good specimen of the West Indies with a couple of mountain chains running from end to end with spurs branching off to the coast and losing themselves beneath the main. Until the recent war Spain controlled the island. During the Spanish regime roads were built between the main military stations, the most conspicuous being that connecting San Juan, a city of 30,000 population on the northeast shore, with Ponce, 35,000 population, on the middle of the southern coast. This road takes a zigzag course across the mountains, passing through Cagay and

Aibonito. Like all of the other leading roads it is formed of coral rock, making a snow white and very hard surface. This magnificent old Spanish highway, climbing through tropical verdure, crosses the mountains which form the backbone of the island. The large amount of travel over it is greatly augmented in the winter season by the hordes of visiting tourists. No one is long in San Juan before he or she has heard of the beautiful ride from there to Ponce; of the fine road stretching like a white ribbon over the hills and mountains and through picturesque ravines; and of the wonderful mountain scenery, reminding the traveler of the stories of Alpine travel. A trip to Porto Rico is incomplete without traversing the old military road. Besides this main highway other shorter routes abound, none of them comparing with the military in length or variety of scenery, though surpassing it in steepness of hills, and depth of ravines. Owing to the hills railroads are scarce, two lines comprising the complete system of the island. Of these, the longer and more prominent extends from San Juan westward along the north shore of

the island, passing through Ariciles, 15,000 population, and on to Camuy, its terminus. The other line occupies the coast in the southwest, stretching from Aquadilla on the west and south through Mayaguez and thence to the southwest corner and then east along the south coast to Ponce. Other railroads are in most cases impossible owing to the hilly nature of the surface, and were hills not found the population and traffic are not sufficient to warrant the building of a road. Good macadam roads serve, however, to connect the more important places with the railroad points. In addition to the military highway there is a fine stretch of macadam road in the northwest, forming the connecting link between the two systems of railroad. This macadam ribbon, for it is nothing else, measures exactly 27 miles in length and extends from Camuy on the north to Aguadilla on the west, termini of the respective railroad lines. It is in connection with this stretch of road that the present story refers. Other macadam roads cross the island at several points.

In such a setting as this C. H. Martin, an enterprising motorist, worked out his dream of a motor bus line. In rehearsing his experiences with this line to Motor Age representative recently Mr. Martin said:

"My personal experience was in connection with a stage line which I organized in Porto Rico a little more than 2 years ago. To the best of my knowledge, this was the first successful automobile line established for carrying mail and passengers on a regular schedule on this side of the world. Having entered on its third year of service without missing a single day's run, it has assuredly demonstrated that the automobile, when properly managed, is practical for passenger work. Although I severed my connection with the company a year ago, I have kept in touch with it and understand that its equipment is in perfect condition. There seems to be no reason why the work should not continue indefinitely.

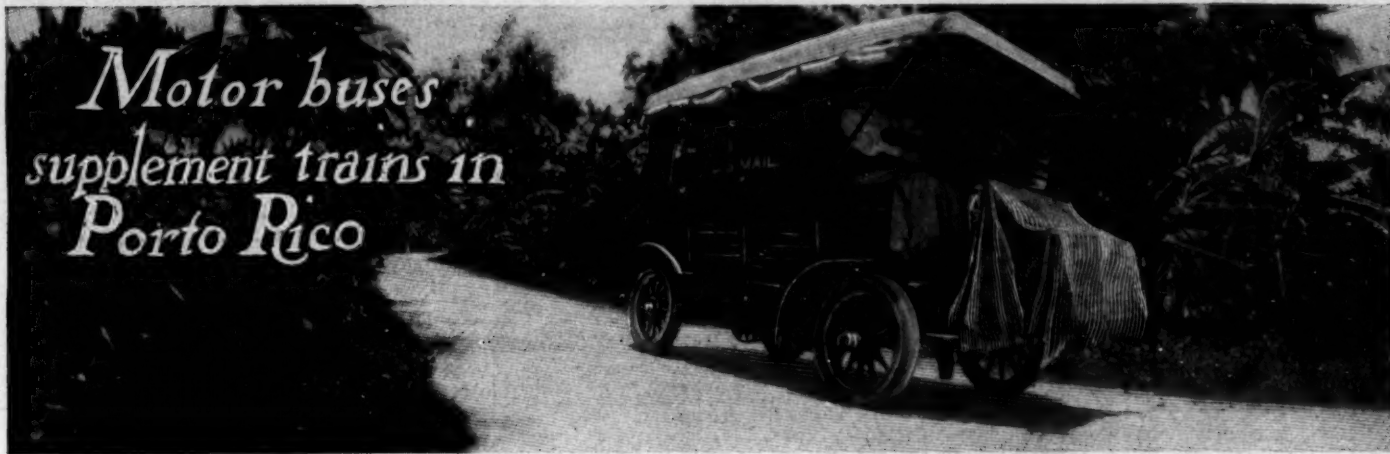
"Shortly after the Pittsburg endurance run in the fall of 1903, I took a Knox run-about down to Porto Rico with the idea



MOTOR STATION AT THE OLD CHURCH IN CAROLINA



## Motor buses supplement trains in Porto Rico



CAR PASSING THROUGH COFFEE PLANTATION ON THE ROAD BETWEEN CAMUY AND AQUADILLA

of testing out the feasibility of putting a line of machines on the great military road. I had been informed of the big tourist travel on the road and of the poor accommodations for making the trip and thought it looked like a good opening for an automobile service. However, after 2 months of experiment and study of the situation, taking note of the number of passengers that crossed the island, I came to the conclusion it was a larger proposition than I was able to swing.

"On the western side of the island there is a short route of 27 miles where a considerable amount of travel could be depended upon and a mail contract secured in addition. Having determined to try my line on this route, a company was organized and I returned to the states and bought three big Knox machines with which we started to work. For the first 6 months the roads were in pretty bad shape, since they were just being macadamized, but we managed to keep going.

"Automobile repair shops were, of course, unknown on the island. We were 1,500 miles from the nearest and it took 3 weeks from the time we sent to the factory for a part before we received it. It may readily be seen that we worked under the greatest possible disadvantages. As our cars were among the first commercial cars made by the Knox Automobile Co. to be equipped with solid tires, our troubles were legion at first. We broke one axle after another and more than one spring. Indeed, had we not been well supplied in the outset with a large amount of duplicate parts, we should have been in deep waters more than once. The strain to which our cars were subjected was probably more severe than any commercial car in the states has to bear. The heat, the sudden fierce tropical storms, the long, continuous pulls over steep hills, and the speed it was necessary for us to maintain, on roads not always good, in order to make the schedule, are some of the factors which entered into our difficulties.

"We were thus enabled to discover the chronic weak points in our machines. As mentioned before, rear axles and springs were our chief sources of annoyance, but we finally received from the factory an

axle of nickel steel without a shoulder which proved a sovereign cure for our axle troubles. It has been the same with other parts. In fact, as we were among the first to use Knox commercial cars, we feel that our experiences were a help in enabling the company to build their present satisfactory car. We had a rule as rigid as the laws of the Medes and Persians, that each machine was to have a thorough inspection after each day's work. Sometimes a half hour's time was all that was needed and again it was an all night's job in order that a machine be in shape for the next day's run. After our business had been systematized and the weak points in construction corrected, we had little trouble. It was not long before our line was as regular as clockwork, and it was rare indeed that we were behind our scheduled running time.

"The happy man has not yet been born who has found the road to success more royal than the road of labor. So operating automobiles for commercial purposes in the tropics is much like operating them successfully in New York or California. It means work, hard work and plenty of it generally. But it has its interesting

side as well as its own peculiar trials. Perhaps at first one notices most the people—so curious about your business, so childlike and naïve, and so utterly irresponsible when you try setting them to work. At least they are simple and for the most part kindly and they seem to have a conviction that all 'Americanos' are as rich as lords. It is worth while to feel like 'a lord' once or twice in a lifetime. Of almost equal interest is the unusual vegetation—the cocoanut palms standing like sentinels, so clearly outlined against the tropical sky; the glossy dark leaves of the coffee hidden in the shade; the wide spreading branches of the mango tree, concealing, perhaps, some dainty orchid in its embrace; or the graceful plumes of the fields of blooming sugarcane. Always not far away is the sparkling sea as blue as the sky above your head.

"Last but by far the greatest attraction to the man interested in automobiles is the number of fine, hard roads made of crushed white coral rock. One of the curious sights to be seen on any road of the island is the 'caminero,' or road maker, often sitting under an improvised shelter of palm leaves, crushing the rock to fill



SCENE ON THE MILITARY ROAD NEAR RIO PIEDRAS



NATIVES AND TOURISTS FORM AN INTERESTING GROUP

up holes in the part of the road which he must keep in repair. This system of making one man responsible for a certain number of kilometers of road keeps the highway in good condition and might well be imitated in our own country.

"Our route was from Camuy to Aguadilla, a stretch of country that was too rough to warrant the expense of building a railroad. The railroad was completed between San Juan and Camuy on the north and between Aguadilla and Ponce on the south, but this 27-mile stretch separated the ends of the lines. The train left San Juan at 6:20 in the morning and arrived at Camuy at 10; sometimes it brought one passenger and sometimes forty, but whether it was one or forty, three machines were sent, as we never knew how many passengers the train from Ponce would have. Before we started the service with motor buses the business over this gap in the railroad was taken care of by thirty-two coaches and 150 horses. It took three teams in relays to get one coach, carrying two people, over this route in 4½ hours. The automobiles each had a capacity of fourteen and made the round trip in little over 4½ hours, thus each machine was capable of doing the work of fourteen coaches and eighty-two horses, so it was a very short time until all coaches except three had left the route.

"We had to make one round trip each day. Starting on the arrival of a train at 10 a. m., we had to connect with a train at the other end of the route which left at 12:30. We started on the return trip at 1 and had to arrive at 3:20. After discharging mail and passengers each machine was put in the garage and subjected to a careful inspection. All bearings, batteries, wiring, valves, were examined and a note made of the condition. If any part showed the slightest sign of being unfit for service it was fixed, and we have more than once worked all night on a machine

that it might be ready to use the next day.

"Our experience with tires would be of little use to users of solid tires in the states for the reason that the roads of Porto Rico are very hard on rubber. Being made of coral rock the surface of the tires is ground off very fast. The first we had were Turners, and they went to pieces in a few hundred miles. The sharp rocks would bite pieces out of them until they soon looked like saws, but when we changed to Firestone tires we had much better results, getting from 8,000 to 11,000 miles out of a set.

"Gasoline cost us 20 cents a gallon in 10-barrel lots. Taking all expenses of upkeep of machines, gasoline, oil, including 10 per cent depreciation, but excluding wages of operators and repair men, the cost was 5¼ cents per mile.

"Out of three operators I took down only one proved to be reliable, and this man is now in charge of the business; but by taking in every native who wanted to learn to run an automobile and keeping only those who showed themselves apt, we managed to get a pretty good corps of assistants after a time. We more than doubled the business in the first 6 months,

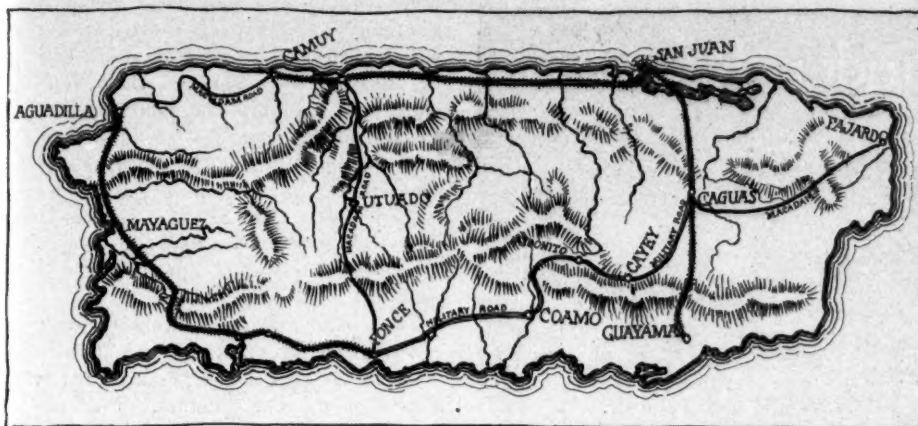
as we had a fixed price and established a reputation for reliability so a passenger felt sure of getting to his destination on time. Besides, we saved 2½ hours each way, as the arriving and departing time of the trains were changed, so the railroad saved that much at each end. Thus by bettering and cheapening the service everybody profited—the railroad company by saving 5 hours' time and doubling its receipts from passengers; the passengers by saving 2½ hours' time and paying less money than they had ever paid before. But our competitor, the man who owned the coaches and horses, profited most of all. When he saw his business getting away from him he sent his horses to other parts of the island and made a bee line for Springfield, Mass., purchased a Knox car and started to drive us off the road by fighting us with our own fire. He carried a full load every day, owing to his extensive acquaintance in that vicinity, and told the writer he had made more money in a year with the automobile than he had made in the last 4 with his horses. Both lines are running over the same route still and are making money.

"Porto Rico has a population of a million people and is covered with fine macadam roads. The only railroad runs along the coast; all freight traffic in the interior is handled by ox carts and passengers by coaches. The opportunities for the automobile are unlimited. There have been several attempts to establish automobile service over the military road, but all have failed, owing to the promoters having no knowledge of the automobile and its shortcomings. I know very little about the first attempts, but the last is worthy of mention. One of the wealthy Spaniards of the island happened to take a trip with us some 6 months after we had things running smoothly and as it was a fine day and we had a large crowd and handled them without a hitch, he was so enthused over the automobile that he decided to put a line over the military road, and asked me to advise him how to equip for it, which I was very glad to do. He sent his son to the states to purchase the machines; the son disregarded the old gentleman's instructions and proceeded to buy two beautiful four-cylinder cars, these rakish,



AIBONITO, NEAR AIBONITO PASS—HIGHEST POINT ON THE MILITARY ROAD





MAP OF PORTO RICO, SHOWING MOTOR BUS AND OTHER ROUTES

sporty looking fellows with five big brass headlights and all the 'fixin's.' These he proceeded to fit with solid tires and a body carrying nine passengers. The chassis was built to carry five on pneumatic tires, so it is needless to tell you that the machines were total wrecks in a very short time. With these failures confronting them the natives are backward about putting their money into the automobile transportation business on the military road, but some day will happen along a man with enough money to equip that route properly and will be rewarded by making 100 per cent on his investment.

"In Porto Rico and other islands of the West Indies the opportunities exist, nothing is necessary but the man, the money and the cars. All three are essentials. Starting a bus line requires money, as cars are costly, a good operating force must be obtained and tire expenditure has to be reckoned with. The great trouble is the tires. Little interest is afforded in rehashing an oft-told tale, but the truth in the tire situation is so evident it cannot be neglected. Solid tires are the only kind. Much as has been said about the enduring qualities of solid rubber tires with a leather covering, little is known of them in Porto Rico. As to the machines, they must be strongly built, with unlimited carrying space for passengers and baggage, as well as mail and often packages. It is not so much a problem of high speed as high reliability. It is consistency—leaving every station on time and arriving at every one on time are the points essential in making a stage line a success."

#### PHILADELPHIA'S AMBULANCE

For the first time in its history the city of Philadelphia is to become an automobile owner. Through the efforts of Director Coplin, of the department of public health and charities, a contract has been entered into with the White Sewing Machine Co. for a motor ambulance, built on lines suggested by the director and embracing most of the good points of similar vehicles used in the government service. Being a steamer, of course, the new vehicle will be heated by steam, lighted by electricity, and will be sufficiently large to accommodate four patients, two nurses

and a physician, besides the operator. It will have a maximum speed of 35 miles an hour and will be delivered early in September. This ambulance will be one of the most complete vehicles of its kind ever built and will be equipped with closets and lockers for the storing away of instruments, bandages, antiseptics and other medicines for emergency cases. The city administration will watch Dr. Coplin's experiment with interest, and if the claims of the builders are borne out the police and fire departments will follow his example and install steam-driven patrol and district chiefs' wagons.

#### MOTOR MILE MARKS

**Spain, Too**—The first line of motor omnibuses in Madrid, Spain, was put into service July 3. Twenty-six buses, each of forty places, were started.

**Up-to-Date**—Lumbermen at Chagrin Falls, O., are making a large traction engine do the work of an automobile truck. They are hauling lumber on a specially built trailer for a distance of about 8 miles. When they do not haul lumber their traction engine is used for plowing. The engine is 110 horsepower and the

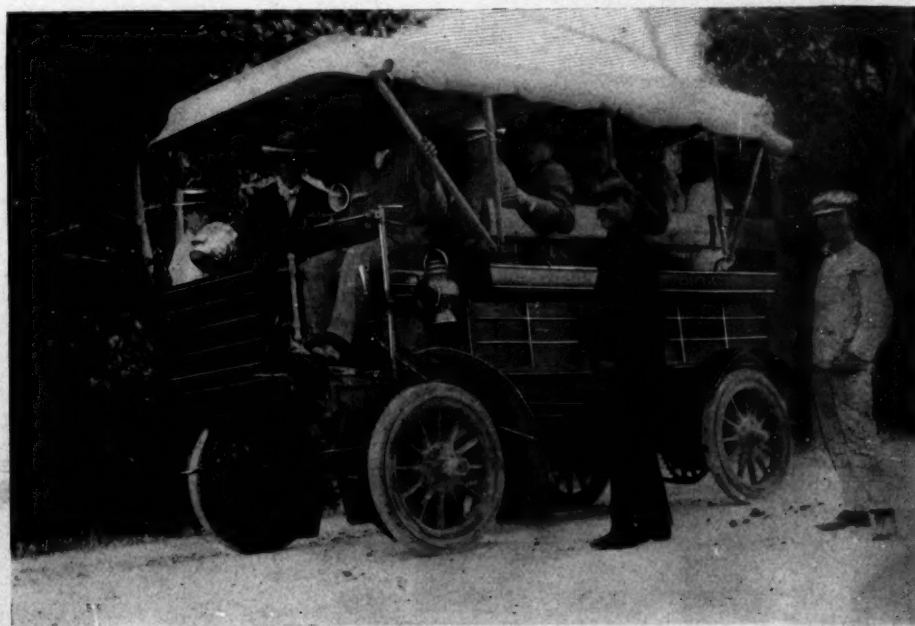
trailer carries 10,000 feet of lumber each trip.

**Mack Enterprise**—The Mack Motor Car Co., of Manhattan, is preparing to run an automobile stage line in Whitestone, L. I. The line to Flushing has already been opened, and later on stages will be put in operation from Whitestone and Great Neck and Manhasset.

**Clever Idea**—Frank Gebhart, of Miamisburg, O., has a large freight truck, which he makes good use of during the week. On Sundays he puts seats in the car and hauls twenty passengers a trip. The idea might be used to advantage by a number of people in small towns.

**Backed by Stroudsburg Capital**—A new transportation concern, to be known as the Dingman's Ferry and Bushkill Automobile Co., was formed by Stroudsburg, Pa., capitalists last week. A large gasoline bus will be put on the route from Stroudsburg to Dingman's and Bushkill next week, on a two-round-trips-a-day schedule. The fare will be \$1 one way or \$1.50 for the round trip. The new line is rendered necessary by the inadequate railroad facilities for summer sojourners, although if the patronage accorded warrants it, the line will be made operative throughout the year.

**Garage in a Bank**—Richard Vaeth, of Tacoma, Wash., has just completed a garage, in which peculiar conditions have been taken advantage of in a most admirable manner. To construct a garage along the usual lines would mean cutting up a portion of his lot for a driveway, and this would not be the best idea, as the land lies fairly high. So he conceived the idea of building right into the bank. As a result the garage is entirely underground, with grass growing above. The entrance is only a few feet back from the walk. The garage is entirely of cement and cost \$1,000 to install it in the bank.



A SHORT STOP BENEATH THE TROPICAL SUN



RAKISH-LOOKING CLEVELAND ROADSTER

**PREMIER RUNABOUT**

Recently the Premier Motor Mfg. Co., Indianapolis, Ind., placed on the market an attractive runabout car that promises to become a popular vehicle among physicians, for whom it was especially intended. In construction the runabout resembles the Model L touring car brought out by the company last spring. The difference between the two cars is principally that in the runabout the chassis is 14 inches shorter than in the touring car, the finish is different and a neat torpedo deck takes the place of the tonneau of the touring car. The motor is the Premier air-cooled type, the same as used in the Premier touring cars, and is of 24 horsepower. With the lighter weight, however, it is expected the runabout can attain a much greater speed than can the touring car with the same power. The runabout is shaft-driven and has selective type sliding gear transmission. The wheelbase is 10 inches, and the wheels, which are of the artillery type, are fitted with G. & J. clincher tires, 32 by 4 inches, both front and rear. It has full elliptic springs and I-beam front axle. Its finish is one of its noticeable points. At present it is in carmine or Brewster green, but it is said the color will be changed to red or maroon to suit the purchaser. The upholstery is of hand buffed, water grained leather to match the finish of the body and running gear, if desired by the buyer.

**CLEVELAND ROADSTER**

Two samples of roadster build recently turned out by the Cleveland Motor Car Co., Cleveland, O., contain in their lines features new and attractive in speedy road car construction. Both of these machines are alike; their general lines being revealed in the accompanying illustration. Combining a 104-inch wheelbase with a unique body design is its one claim to attraction. Rakishness consists in having a very long bonnet with a gentle taper to the front, where

it fits over the sides and top of the radiator, a narrow brass flange being the only indication from the side of the radiator's presence. Extra length is given the bonnet because the dash is carried 10 inches further to the rear than in the standard Cleveland touring car, which change permits of the 13½-gallon gasoline tank being carried beneath the bonnet and between the back cylinder and the real dash. Between the tank and the motor is a wood partition. The filler for the gasoline tank is on the rear side of the dash, permitting of filling it without raising the bonnet. A pronounced racing effect is exhibited in what might be termed the entire absence of a dash such as appears in touring cars, a result accomplished by sloping sheet iron sides extending well back alongside of the footboard with a very narrow backward projection on top. The sight feeds of a mechanical oiler, the gasoline-filling funnel and a cut-out plug comprise the dash decorations, a trio occupying but little space. The driver's seat and that for his companion are carried well between the front and rear axle, slightly closer to the latter. Directly above the back axle is a rumble seat with a large tool box beneath it. In the rear of it is a framework for carrying tires. The upholstery is in plain leather without tufting. Like many of the present season roadster productions, the Cleveland attributes much of its raciness to the fenders, which are of the long, sloping style; forward ones rising rapidly from the side step to above the center of the wheel and

there ending and rear ones rising more gradually and hugging the curve of the wheel until well in rear of the center of it. Leather flaps between them and the framework prohibits the splashing of mud on the body. Because of these several body changes the change speed and emergency brake levers are placed 22 inches further back than in the pleasure car. The tread is 56 inches and tires are 34 by 4 inches. The weight approximates 2,160 pounds.

The chassis, made entirely of Garford construction, is practically as it will be in all of the 1907 models, making the roadster a next year product. The motor, rated at 30-35 horsepower with 4½ by 5¼ inch cylinders, generates its rated power at 1,000 revolutions per minute. It carries a Simms-Bosch low-tension, make-and-break ignition scheme, with the make-and-break parts accessibly carried on the top of the cylinders. In controlling the speed, ranges between 4 and 55 miles per hour are made without changing the spark, the throttle alone being sufficient. In starting the spark is retarded from the steering wheel, but once the car is under way it is placed in the most advanced position possible and not altered while running. Transmission is through a leather-faced cone clutch, sliding gear transmission giving three forward speeds and propeller shaft drive to the floating type of back axle. The gear ratio is two and one-half to one—a high speed rating but not too high to prevent starting on the high speed. Nickel steel enters largely into the many points of construction, it being used exclusively in the front axles, connecting rods, transmission shafts, rear axle drive shafts and propeller shafts. The crankshaft is a drop forging made from high carbon steel, and is carried on three plain bronze bearings. Plain bearings of hardened steel type serve in the gearcase and ball bearings in the back axle and the front road wheels.

**AEROCAR RUNABOUT**

American body designers are exhibiting more originality in the design of roadster or runabout bodies than in any other part of their car design. The aim of many appears to be the revolutionizing of a touring car chassis into a racing machine by the addition of a body whose lines are part of one and part of the other. One of the latest styles out is the Aerocar, coming from its maker, the Aerocar Co.,

Detroit. As shown in the illustration, its body might pass for that of a Vanderbilt racer, so long and plain is it made, with an absolutely smooth bonnet spreading slightly to the dash, where it terminates in a miniature funnel effect. The footboard, inclosed by high, outwardly opening side doors hinged at the front, is perfectly inclosed, the doors obstructing the cold breezes and offering a smooth side surface to



FRAYER-MILLER AIR-COOLED RUNABOUT

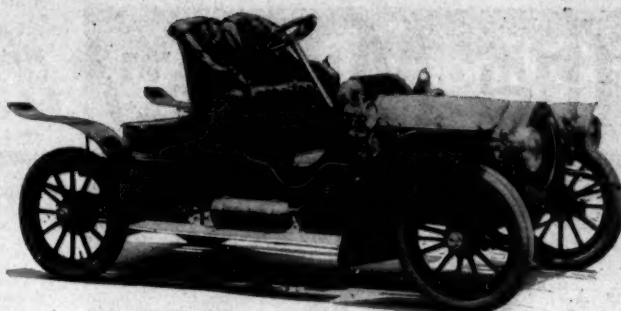


the winds. The seat, partly divided, carries tufted upholstery and has low sides, with medium height of back. In the rear is an irregular shaped carrying compartment in which the sides, of an even height to the back, are bent inwards at the upper back corners, where they meet the slightly slanting back, giving an effect different from anything yet attempted in roadster machines. Front and rear fenders, each made from solid pieces of charcoal iron, are so shaped that mud and water are thrown out from the car on striking them instead of down and onto the wheels or in towards the car body, and have an aeroplane design, their tendency being to cut the air without producing any lateral pull on the steering mechanisms. All operating parts are carried within the sides of the machine, the change speed lever being within the side doors, thus permitting of running the machine without any reaching beyond the doors. An emergency brake lever is not used.

The finish of the car is of such an oily nature that muddy water, it is said, will not adhere to it, but roll off. The only operation necessary to keep the car always looking like new is to wipe it over with an oily cloth after it has been cleaned. The capacity of 24½ gallons to the gasoline tank is furthermore of importance for a touring runabout, and is so far unprecedented. The gasoline tank is provided with two gasoline cocks, one with a regular handle and the other with a square end, to be opened with a wrench when the regular supply of gasoline has been exhausted. The opening of the second cock will insure the driver of enough gasoline for a 50-mile run and can therefore be justly called a low lever gasoline alarm.

Being started on the high gear, it is driven with a permanent high advance spark on the throttle only, and will give range from 8 to 60 miles, according to road conditions, by touching the throttle lever. Quick fluctuations in the speed of the car can be made by operating the clutch pedal, which, being thrown in the first notch, releases the clutch and retards the spark, thereby preventing the engine from racing and at the same time maintaining a full charge of gas in the cylinders, making it impossible to be stalled by changing gears on a hill. Moving this pedal further forward sets the hub brake gradually. Tipping the foot forward releases the pedal and the gradual engaging clutch, of special design, makes the car pick up rapidly. The right-hand pedal operates the transmission brake only, and is used as an emergency brake in combination with the left-hand pedal.

This roadster, officially styled model C, carries a power and transmitting plant almost identical with that in the present



PREMIER FOUR-CYLINDER RUNABOUT

Aerocar machines, such changes being included as are ready for next season's machines. The motor, 20 horsepower, consists of four vertical, separately cast, air-cooled cylinders, the cooling mediums being circular metal flanges formed integrally with the cylinder walls. The bore and stroke are 4 inches. Valves for the intake and exhaust are carried side by side in the cylinder heads, being actuated from one camshaft, on the left side, through the medium of push rods, rising at the sides of the cylinders, and rocker arms carried on supports on the cylinder head. The exhaust piping leaves from the right side, the intake pipes leading to the motor on the left. The carburetor is without any springs and positive in its adjustment and of the modern three-jet type. How perfect the mixture is supplied by this carburetor at different car speeds is best demonstrated by rapidly opening and closing the throttle, and if properly adjusted this carburetor will never cause any missing or back-firing.

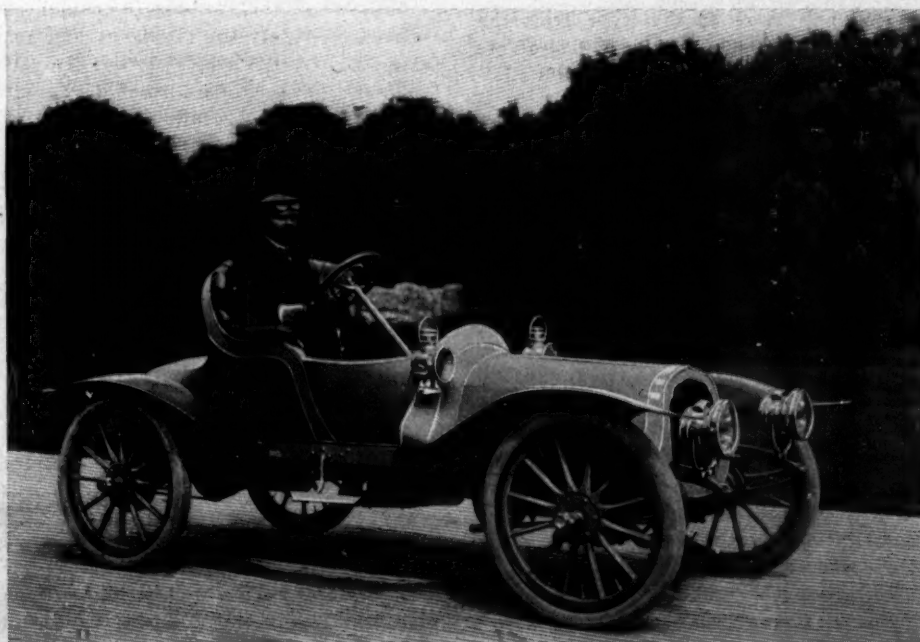
The commutator used is of special construction, as it permits of the absence of any oil from the interior of same, thereby eliminating a permanent insulator, and connected in well known form for interrupting and making electrical contact—that is, the knife switch. The knife being

of hardened and ground steel and the brushes of hard phosphorus-bronze, there is practically no limit to the wearing qualities of this commutator. At the same time the construction of it makes the missing at high speed very difficult. The steering gear, the same as used in the present Aerocar machines, is set at a greater angle, throwing the steering wheel farther to the back, while leaving the gear in its same position between the axles. Throttle and

spark control are on the wheel. The change speed lever operates through a slot in the car floor, and while well out of the driver's way has the great advantage of inside operation. Regular and emergency brakes are applied by pedal. Ignition is by jump spark, with current furnished by either dry or storage cells. The coil is located on the dash. In the running gear a typical pressed steel frame construction is carried on a semi-elliptical suspension.

#### FRAYER-MILLER RUNABOUT

Some weeks ago Motor Age announced the completion of the six-cylinder Frayer-Miller runabout from the factory of the Oscar Lear Automobile Co., Columbus, O. This week is illustrated a four-cylinder runabout which carries a standard 24-horsepower air-cooled motor, with cylinders cooled by air jackets and air blast directed into these jackets. The runabout presents no rakish traits, having a regulation bonnet secured by strap, and standard seat and sloping carrying compartment. Fenders, running boards and equipment are in keeping with the touring car lines, making the runabout a two-passenger car of conservative lines in every regard yet an attractive outfit. Like all other runabouts or roadsters it has a full quota of equipments.



NOVEL DESIGN OF BODY ON AEROCAR ROADSTER

# Among the Makers & Dealers

**In Cincinnati**—The Aerocar is now being represented for the first time in Cincinnati by J. Edsall, who also has the agency of the Logan.

**Schott a Prest-O-Lite Man**—Walter A. Schott, for some time past connected with the Rose Mfg. Co., is now pushing the sale of Prest-O-Lite gas tanks and Prest-O-Tire tanks in eastern territory.

**Will Educate Salesmen**—The Franklin company is arranging for an automobile salesmen's class, where the entire selling force will be given practical education in the various features of Franklin cars.

**Benjamin an Agent, Too**—The Buffalo agency for the Aerocar has been placed with C. A. Benjamin, of the Buffalo Automobile station, 240 West Utica street. Benjamin will keep up his other work as sales manager of the Babcock company.

**Uncle Sam Buys Car**—Hook & Stoddard, Washington agents of the H. H. Franklin company, will deliver a 20-horsepower type D car to the government for use in the army maneuvers at Mount Getna, Pa. This car has been bought for use in the quartermaster's department.

**Rochet-Schneider Men**—Gilmour & Connors have moved into their new establishment at the corner of Broad and Vine streets, Philadelphia. Besides handling many of the best-known accessories, this firm represents the Rochet-Schneider in the Quaker city and vicinity.

**Ford Runabout Out**—Manager Thomas Hay, of the Chicago branch, has received his first Ford four-cylinder runabout. The new model arrived Saturday and is the second one of the crop turned out by the Detroit factory. No attempt will be made to sell any more of this type from the Chicago branch at least, sufficient orders having been secured to use up Hay's allotment this year.

**Busy at Hartford**—These are busy times at the Electric Vehicle Co.'s factory at Hartford. The company's spur track is in constant use and heavy shipments are being made daily. Great care is exercised in loading the vehicles for transit, only boxed cars in perfect order being used. The electric assembly department of the factory is especially rushed to meet the demand for Victoria phaetons and runabouts.

**Elmore's New Buildings**—Additions now being made to the plant of the Elmore Mfg. Co., of Clyde, O., will give that establishment more than double its present capacity. Three new buildings, each two stories high, are being erected. These buildings are, respectively, 108 by 40 feet, 100 by 40 feet and 70 by 40 feet, thus adding more than 22,000 square feet of floor space to the present extensive plant. One of the new buildings will be of concrete



ORIENT BUCKBOARD FOR POLAR EXPEDITION

and the other two of modern wood and iron construction.

**Weight of Big Ford**—The assertion is made by the Ford people that their 40-horsepower six-cylinder model weighs exactly 2,500 pounds with the radiator and gasoline tanks full, but without the cape top. With side curtains the top weighs 75 pounds.

**Ball With Berliet**—Herman F. Ball, superintendent of motive power on the Lake Shore railroad at Cleveland, has resigned his position and will become identified with the American Locomotive Automobile Co., probably as general superintendent or general manager.

**Will Make Six-Cylinder Models**—The Roscel Co. of America, handling the Roscel car, made in Sochaux-Montbéliard, France, announces that in addition to the four-cylinder models the French concern will turn out three types of six-cylinders, 40, 60 and 80 horsepower.

**Garage in Bedroom**—L. L. Whitman, Pacific coast representative of the Franklin company, was in Syracuse last week. He has transferred his automobile garage in San Francisco to a front bedroom on the second floor of a dwelling in Golden Gate avenue. He uses the bedroom for an office and the street for a store house. He says that the earthquake has been an impetus to the automobile business and from his bedroom he has sold machines aggregating \$75,000 in value.

**Randolph Resigns**—On account of the death of his son H. E. Randolph has resigned the offices of secretary and assistant treasurer of the Maxwell-Briscoe Motor Co. Mr. Randolph was deeply affected by the loss of his son and decided to leave Tarrytown, which necessitated severing his active connection with the Maxwell-Briscoe concern. His resignation was accepted with great regret, as he was one of the incorporators of the company and had been with it since it began business. In all probability he will take charge of the Kelsey Suspension Co. and open an office in

New York city. Frank Dorman, recently assistant to the manager of the Maxwell-Briscoe Motor Car Co., has succeeded Mr. Randall as secretary of the concern.

**Six-Cylinder Stunt**—A. T. Wilson, the Ford agent in Denver, claims he went 15 miles up Pike's peak in a six-cylinder Ford, being stopped when the trail became so steep the wheels would not hold on the surface.

**Renault Election**—Paul Picard announces that Renault Brothers have decided to open an American branch with headquarters in New York. Fernard Renault is chairman, M. de Montaigne administrator and M. Lacroix director.

**New Company**—The Hawley Automobile Co. has been organized at Constantine, Mich., and will erect a factory at once. Officers are William L. White, chairman; H. H. Riley, vice-president; R. B. Hawley, secretary and general manager, and William H. Barnard, treasurer.

**Needs More Room**—The rapid increase of business has compelled Manager Smith to add the entire upper floor to the facilities of the big White garage at Broad and Mount Vernon streets, Philadelphia. A large force of carpenters is at work making necessary alterations and by August 15 the facilities of the establishment will have been increased 50 per cent.

**Invents Gasoline Tank Stopper**—Serge Vincent Bolotoff, a French inventor, has brought out a new idea in stoppers for gasoline tanks. Instead of the screw stopper he uses one operated by levers consisting of a metal cone with fiber surface, held in place by a powerful spring worked by a lever. When it is necessary to open the tank a pull of the lever allows the cone to slip inside, leaving the mouth open to receive the gasoline. Pressure on the lever closes the stopper and seals the tank.

**Franklin Also Building**—The H. H. Franklin Mfg. Co., of Syracuse, has started work on a new five-story building, 65 feet wide and 130 feet long, which will connect with the rest of its plant. The building is to be of reinforced concrete construction with a brick exterior to conform in general appearance with the other buildings in the group. The work will be rushed so that the entire building will be completed by September 10. It is to be used for general manufacturing purposes and will enable the company to increase its output to 2,000 automobiles a year and give employment to 1,600 men. In addition to this, a shipping building, 75 by 90 feet, will be erected. The open shop in the court is to be enclosed and the present roof to be replaced by skylights. This



building is 60 by 130 feet and is used in making the final inspection of the cars. The cost of the improvements will be about \$50,000.

**Fire at Noblesville**—Fire recently destroyed the repair shop of Asa Robertson at Noblesville, Ind., and six automobiles left to be repaired were burned, the total loss being \$10,000, which was not covered by insurance.

**McDuffee's Business**—Before he started in the Glidden tour J. H. McDuffee, of the McDuffee Automobile Co. of Chicago, announced he had sold and delivered this season 104 Stoddard-Daytons and that he had contracted for twenty-four more of this year's crop.

**Location for the Monarch**—The Monarch Motor Co. has paid \$30,000 for the factory buildings formerly occupied by Siegel, Cooper & Co. at Franklin park, Chicago, and will use them for the manufacture of Monarch automobiles. The plant will be improved and enlarged.

**Foreign Demands**—President M. J. Budlong, of the Electric Vehicle Co., thinks South America will ultimately develop into one of the most important markets for American cars. A great many Columbia electrics are already in use in the principal cities of Brazil and the Argentine.

Many inquiries have also been received this season from New Zealand, but up to the present time no actual sales have been reported.

**Mitchell Branching Out**—The Mitchell Motor Car Co., of Racine, Wis., has broken ground for the erection of a fireproof machine shop which will be built of cement and iron. It is expected that when the plant is in full working operation at least 200 men will be given employment in this one addition.

**Garage in Tioga**—Schultz & Walther on Monday last opened the Northern garage, at Thirteenth and Westmoreland streets, Philadelphia. The entire outfit is new and the facilities for quick repair excellent. This new establishment will prove a great convenience to the many automobilists of Tioga, which is one of Philadelphia's handsomest suburbs.

**Hawley With Brandenburg**—P. E. Hawley, for the past year manager of the Detroit branch of the Continental Caoutchouc Co., has resigned his position with that company and will hereafter be identified with the Brandenburg Co. of Chicago, New York and Detroit, manufacturers' sales agents. This firm is composed of George G. Brandenburg, J. I. Brandenburg, F. E. Moskovics and P. E. Hawley.

Hawley also retains his position as president of the Automobile Equipment Co.

**Orient Up North**—Walter Wellman, sent out by the Chicago Record-Herald to find the north pole, has taken with him an Orient buckboard which he expects will be of great benefit to him when inside the Arctic circle.

**Ordering '07 Packards**—The 1907 Packard is meeting with its usual success in Philadelphia. Manager Wayne Davis reports that up to last Saturday no less than thirty-five orders for the latest model had been received by him.

**Babcock Agents**—The Babcock Electric Carriage Co. has concluded agency arrangements with the following: I. W. Dill Carriage Works, Harrisburg, Pa.; Mar-Del Mobile Co., Baltimore, Md.; Diamond Motor Car Co., Philadelphia, Pa.; W. D. Ham-mill, Williamsport, Pa.

**New Quaker Concern**—The Roman Automobile Co. is the latest accession to Philadelphia's rapidly-growing garage list. The new concern has secured the premises formerly occupied by the Ludwig Auto Co., at 1335 West Susquehanna avenue, uptown, and at 202-204 Watts-street, near gasoline row. A general storage, repairing, exchange and livery business will be carried on by the company.



## MOTOR CAR LITERATURE



"Eighty-seven Miles on 2 Gallons of Gasoline," the title of an eight-page book issued in the interests of the H. H. Franklin Mfg. Co., Syracuse, N. Y., tells the story of how the Franklin runabout traveled 87 miles on 2 gallons of gasoline in the May 2-gallon efficiency test of the Automobile Club of America. It is a short but interesting story, supplemented by a catalogue resumé of the Franklin line and press clippings on the performance.

The Orlando F. Weber Co., Chicago agent of the Pope machines, has in circulation a booklet called "Weber Service," a catch line which it regularly uses. The book is neatly arranged, has a broad green border surrounding each page, with "Weber Service" as a running head, and a letter from a satisfied customer on each page. The different machines sold are illustrated and priced.

The E. C. Walker Co., Louisville, Ky., uses a cord-bound catalogue of eighty-two pages for representing its entire line of supplies for motor car and motor boat uses. Included in its pages is a big line of all styles of motors, two lines of carbureters, transmissions, lubricators, differentials, jacks, tires, forgings, lamps, generators, running gear, horns, speedometers and the many other appurtenances. A paragraph or two of description on each part explains it mediumly well.

C. S. Mendenhall, 512 Race street, Cin-

cinnati, O., in his map of New York state uses his usual scheme for designating main routes, good roads, common roads, railroads and canals. In addition to the map of the state are others—one of Long Island, another of Greater New York city, one of Monroe county, one of Erie and Niagara Falls, another of Onondaga county and still another of that part of the state surrounding Albany, including a radius of 30 miles. The map when folded is inclosed in a heavy paper book cover, pocket size, and has in addition a list of ninety motor car routes within the state.

The Rossel car, manufactured by F. Rossel & Co., Paris, France, and retailed in America from Thirty-ninth street and Broadway, New York, by the Rossel Co. of America, is well catalogued, the book giving details of all parts and including in its score of illustrations line drawings of the chassis clutch and other parts. Several dissembled photographic illustrations show the transmission, differential and other parts. Several factory illustrations decorate the introductory pages.

Fifteen illustrations of Duff's roller bearing ratchet screw-jacks are included in the present catalogue of them prepared by their maker, the Duff Mfg. Co., Pittsburg. A page devoted to each style contains an illustration, the capacity of the jack, its rise in inches, list price, diameter of head, and weight.

The Monarch Motor Car Co., 464 Monadnock building, Chicago, has issued a folder on its Monarch car for the coming season. The chassis, with its two-cylinder engine and planetary transmission, is well shown, as is a side view of the car.

"Don't Worry About Your Speed" is the advice given on the cover of a booklet in the interest of the Webb speedometer. But two pages of matter are given, one a full-page view of the apparatus and the other a few general statements regarding it. The book comes from the Webb Co., Newark, N. J., makers of the instrument.

Knight & Kilbourne, Chicago, makers of the Silent Knight car, deserve commendation for the informative catalogue just issued on the Silent Knight motor car, a four-cylinder four-cycle, one with reciprocating sleeves between the pistons and the cylinders for opening and closing ports in the latter, thus eliminating the use of poppet valves. On the center double pages is a two-page wash drawing of the motor in section, with all parts clearly shown and a key list to explain letters used on the drawing. It is one of the best catalogue illustrations yet seen. The many other illustrations, though not large, are clear and well explained. The mechanisms of the motor are extra well described, the exact size of the ports and the sleeve thicknesses being given.



# From the Four Winds



**Sicily Gets Next Targa**—The Targa Florio will again be held in Sicily. This is a speed race for touring automobiles over a mountainous course and was won by Cagno this year in an Itala.

**Longworth Modern** — Nicholas Longworth, son-in-law of the president, does not share the feelings of Mr. Roosevelt toward the automobile, for while on his honeymoon in Paris he often went riding in an automobile. One camera caught the congressman traveling through the streets in a big Mercedes.

**Belgian Test**—From July 21-25 will be disputed the Belgian Criterium, or endurance test, in which there are five categories of cars, based upon their cylinder capacity. The more heavily powered car and with the larger number of seats has to run at higher speed than the smaller powered cars, but the speed in no case is to exceed 28 miles per hour. Spa, Lumembourg, Reims, Dinant are included in the itinerary of the trip.

**Queer State of Affairs**—An arrest for exceeding the speed limit in Hartwell, O., recently developed a peculiar state of affairs. The Springfield pike is one of the finest pieces of roadway in this section, and one side of the road lies within the corporate limits of Hartwell. The speed limit in Hartwell is 6 miles per hour for all vehicles. Going north, cars almost creep, for the town marshal has a genuine eagle eye, while southbound, a mile-a-minute clip is the average.

**Speed in Big Races**—While the average speed of Szisz in the recent grand prix was faster than that in any of the Bennetts, still his 61¼ miles average is not as fast as the 66.4 made by Hemery in the last Ardennes. In the 1900 Bennett the 24-horsepower Panhard did 38 miles; in 1901 a 40-horsepower Panhard did 37¼; in 1902 a 40-horsepower Napier did 30¼; in 1903 a 60-horsepower Mercedes did 56; in 1904 an 80-horsepower Richard Brasier did 53½; in 1905 a 96-horsepower Richard Brasier did 48½.

**Canadian Restrictions**—Advices from Three Rivers are to the effect that the provincial authorities of Quebec have legislated on the speed limit of automobiles and a local tax will be imposed on cars not owned in the province. Those brought from the adjoining territory of Ontario will be taxed \$5 per annum, but all entering from elsewhere will be subjected to a tax of \$10. Americans expecting to tour Canada in their automobiles will therefore be subjected to this larger fee of \$10 by the revenue officers of Quebec. The speed limit for the country roads is 15 miles,



CONGRESSMAN LONGWORTH'S ARRIVAL IN PARIS

and for cities and towns it is not to exceed 6 miles an hour. Infractions of the law by automobilists will be subject to a fine of from \$20 to \$100.

**Ostend Entries**—The Ostend meeting has thirty-seven cars entered. These cars include a Pope, Fiats, Italas, Mercedes, Pipes, Metallurgique, Peugeot, Berliet and Delaunay-Belleville.

**New German Tariff**—The new automobile tariffs came into force in Germany July 1, and tourists are allowed in that country with their machines for the space of a month at a nominal entrance fee. After this period if it is desired to remain in the country with the car, full duty must be paid, amounting in the case of, say, a 45-horsepower machine to \$125. The hotel keepers are beginning to kick already at the stiff prices.

**French Changes of Front**—Jefferson de Mont Thompson, now in Paris, states that the Renault firm will not be represented in the Vanderbilt since the decision of the committee was taken before the firm had decided to enter the lists. Mr. Thompson says that since the grand prix he has found that the attitude of French constructors towards the Vanderbilt race has undergone considerable change and he was much embarrassed at the demands to enter cars in the big event.

**Cleveland Signs Liked**—The many favorable comments from automobile tourists relative to the sign posts erected by the Cleveland Automobile Club on the roads between Cleveland and Fremont on the west and Conneaut on the east has determined the club to go ahead with the work and it will gradually place similar signboards on all the roads leading out of Cleveland, particularly the roads leading to Columbus and Pittsburg. Secretary Goddard has communicated with clubs in Columbus, Toledo, Cincinnati and Dayton calling attention to the work which has

been done by the Cleveland club and suggesting that the organizations in these places take steps to properly mark the roads in their district.

**Bar Harbor Bars Cars**—The Summer Residents' Association of Bar Harbor, Me., has reaffirmed its old resolution barring automobiles on the island. The association then selected Dr. Robert Amory president of the organization.

**New York Registration**—That there is no decrease in the number of automobiles being sold in New York state is shown by the number of cars registered with the secretary of state at Albany during July, the figures of which have just been compiled. There were 1,543 cars registered, representing 128 different makes.

**Betz Cup Driver**—J. Fred Betz III, a Philadelphia amateur, is to drive the Maxwell Vanderbilt cup racer in the American eliminating trial on September 22. The Maxwell-Briscoe Motor Co., of Tarrytown, N. Y., is building two cars, one of eight cylinders and the other of twelve cylinders, and the one which shows up best in the preliminary try-outs will be driven by Betz in the contest to select the five members of the American team. This will be Betz's first appearance as a race driver. He is a member of the Cape May Automobile Club.

**Old Industry Revived**—The automobile has been a great boon to E. N. Hughson, 86 years old, of Clyde, N. Y., one of the oldest tinsmiths in the United States. He has resumed the manufacture of perforated lanterns, which he made 73 years ago. Several automobile parties have bought the lanterns as curios, and now Mr. Hughson is quite busy supplying the demand. Mr. Hughson's present activity reminds him of the days 50 years ago when he learned his trade, and made these lanterns, whistles, rattles and numerous other trinkets, with which the peddlers' carts from the early days were plentifully supplied.

**Dust Layers' Troubles**—A persistent attempt has been made in England to force the adoption for main road surfaces of a sort of tar macadam which has been titled "tarmae," the invention or composition of the county surveyor of Nottinghamshire. A small company was formed to secure proprietary rights in the mixture and contracts were entered into for demonstration purposes, but the true inwardness of the whole affair is now shown in the fact that the company has become bankrupt, every one of the contracts having been entered into at prices which entailed a loss. These prices ran to about \$1 a square yard. It is



a peculiar thing that all these road surface preparations intended to prevent dust have failed to pay their way in England.

**Social Settlementers Ride**—The orphans in the Social Settlement, Cincinnati, were given a picnic and automobile ride on the 11th. They were taken to the grounds, near Hartwell, in a number of cars donated for the occasion.

**Fooing the Constables**—The Automobile Club of Philadelphia has gone down into its jeans to the extent of \$125 to post "Sound your horns at all crossings" signs throughout Springfield township, Montgomery county, where the superserviceable "cops" are collaring all who neglect to "honk-honk" when approaching a crossroad.

**To Weigh Before and After**—The hill-climbing competition at Mont Cenis is what Italy has to offer this year in that direction. It takes place on July 15 and is attracting a great deal of attention and support among Italians. Special trains will run from Turin to Mont Cenis. The cars will be weighed both before and after the hill-climbing competition—an Italian innovation.

**Post Mortem by Jenatzy**—Jenatzy, who drove a Mercedes in the grand prix, declares if he had not been blinded by the tar dust he would have finished higher up in the list. The goudronite so affected his eyes that he had to undergo an operation. It was a noticeable fact that on the second day of the race the drivers did not suffer so much from the goudronite, as the dust was swept off the course the first day by the racing cars.

**Car as a Sleuth**—An automobile helped the secret service people make Williamsburg, O., a dry town the other day. Williamsburg is a local option town, but a number of "blind tigers" have been running in full blast, but no evidence could be secured to convict the operators. After some evidence had been secured, two secret service men purposely broke an axle on their automobile and stopped in front of a blacksmith's shop to have it repaired. Then they wanted a drink, and wanted it

badly. The blacksmith produced the necessary, and they produced a warrant. The result—the lid is on in Williamsburg.

**Locomobile on the Hills**—Photographs have come from Denver showing some of the grades a car is called on to climb out there. Two of them show Judge Colburn and G. A. Wahlgreen in a 15-20-horsepower Locomobile on one of the hills.

**Questions Ohio Law**—The first case to test the constitutionality of the new Ohio automobile law is being brought in Dayton by G. W. Shroyer, Elmer Gallagher and N. E. Duble, charged with violating the speed limit. Should the cases be dismissed, the law will be unconstitutional, and there will be no law to govern automobiles in the state of Ohio.

**Dutch Sporting Event**—At the Scheveningue meeting, which is the Dutch sporting event of the automobile year, there was held on July 9-12 races over the flying kilometer, for both racing and tourist cars. In the racing series were a Darracq, a Napier and a Mercedes car. In the tourist class were large numbers of entries—fifty-eight for the speed contest, fifty-four for the fête des fleurs, thirty-one for the torchlight procession, fifty-two for the carriage body competition and fifteen entries for special prizes.

**Now Hurts Bathing**—Has the reign of the automobile lessened the popularity of bathing? That is a question that is being widely discussed around Buffalo. While the lake bathing season is on in full force at the various beaches still the popularity of this enjoyable sport seems to be on the decline. There are fewer in attendance at the swimming resorts along Lake Erie than heretofore. Those who have been standbys during the past seasons in many instances have not been in the water this season. The weather conditions have been as good as usual for bathing. The water was never in finer condition than at present. The beaches are as good as ever. In looking about for a possible reason for this decrease one of the most ardent devotees said that he blamed the large increase in the number of automobiles for the change.

Many of those who went in for bathing a few seasons ago now indulge in automobiling.

**Quit Bicycles for Automobiles**—The Flying Rollers, a religious sect that has its headquarters at Benton Harbor, Mich., have decided to abandon the use of bicycles for their missionaries and instead travel in automobiles. One car has been bought and another ordered. The sect has a membership of 144,000.

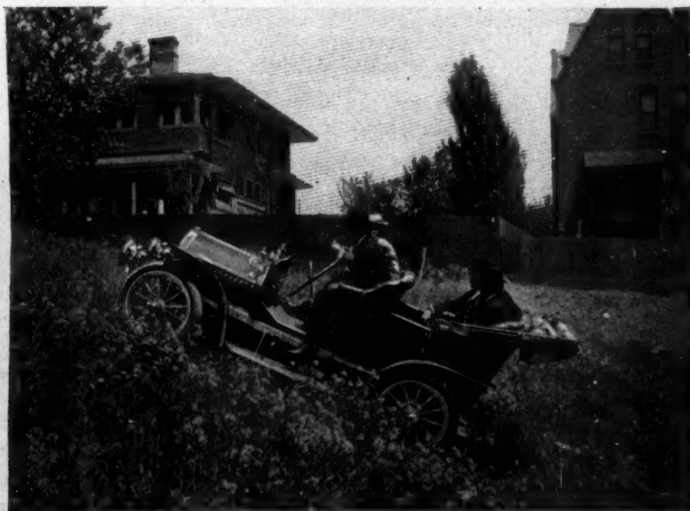
**Added Prize for Florio**—The executive committee of the Italian Florio cup race which is down for September 2 decided to establish an additional prize of \$10,000 in cash, to be handed to the winner of the cup. As the circuit is cut by the Milan-Venice railway line, there will be constructed over the line a wooden bridge 6 meters high with easy gradients, to avoid the level crossing. The cars will be able to take the bridge at full speed.

**Hoosiers Will Test Law**—Indianapolis owners are preparing to make a test of the legality of the Indiana automobile speed law and will carry the matter to the supreme court of the state if necessary. Nearly one dozen drivers who were arrested under the city speed ordinance were dismissed when the police were told there was a state law, and were then rearrested under the latter. In police court each was fined \$1 and costs and all have taken appeals to the higher courts. The decision of the upper courts is being awaited with much interest.

**Will Fix Tonawanda Road**—The river road at North Tonawanda, N. Y., is to be improved. The road for some time past has been a source of great annoyance not only to automobiles passing over that route but to ordinary teaming as well. Just how much money there is to be expended on this improvement is not determined, but it is intended to put that strip of road in the best possible shape. The present intention is to grade and prepare the foundations and fill with cinders, which will be rolled in thoroughly and covered with top dressing of ore dust.



IN ACTION



LOCOMOBILE DOES A HILL-CLIMB IN DENVER

STANDING

## BRIEF BUSINESS ANNOUNCEMENTS

**Biloxi, Miss.**—G. B. Elder & Co. are to open a garage and repair shop in this city.

**Philadelphia**—The Northern Garage, of Thirteenth street, above Westmoreland street, has opened for business.

**Rochester, N. Y.**—The United States Automobile Co., agent for the Baker electric, has taken the local agency for the Autocar.

**Logansport, Ind.**—The Western Motor Co. has put up a brick addition to its plant, 45 by 260 feet, giving an increased floor space of 16,000 square feet.

**Pittsburg**—Application has been made for a charter for the Vestal Shock Absorber Co., which is to manufacture shock absorbers and other supplies for automobiles.

**New York**—The Louis Burghardt Mills Co. has leased for a term of 21 years 211-213 West Eighty-second street and will build a garage to be ready for occupancy next September.

**Buffalo**—An ordinance is about to be passed against the opening of garages in residential districts. This is brought about by the protests against the new factory lately opened on Edwards street.

**Boston**—W. A. Page & Co., agents for the Simplicity car, have opened a new store in the Motor Mart. They have taken the store on the Park square side of the ground floor, formerly occupied by the Orient agency.

**Albany, N. Y.**—A new automobile garage has been opened by the Albany Garage Co. at 28-30 Howard street. In addition to having all conveniences for storing cars it has a fully equipped repair shop. The company is the representative of the Peerless, Thomas and Stevens-Duryea.

**Indianapolis**—The Himes-Edlin Automobile Co. has been organized and has obtained the lease on a large building at 115 West Maryland street in that city. At present the company will devote its attention to automobile storage and repairing, but later will take the agency for some car.

**Middletown, N. Y.**—Rutan's garage has changed hands and will be run by a stock company which probably will be called the Orange County Automobile Co. H. C. Fairchild will be president and August Bretthauer secretary and treasurer. Fairchild was the organizer of the Motor Car & Storage Co., of Paterson.

**Ridgewood, N. J.**—A new automobile line is about to be started between this village and the city of Paterson. About the first of the month two cars will be put in service, running on a half-hour schedule, one leaving the city hall and the other the Rouclere house. A fare of 40 cents a

round trip will be charged. President Hall and others of the Union Transit Co. are interested in the scheme.

**Lynn, Mass.**—Frank J. Gosseline has opened a new garage at Nahant in the old Coddell barge stable.

**New York**—Plans have been filed for a new garage to be built for J. H. Johnston at 18 Washington square for his private use.

**Philadelphia**—Among the recent additions to the force of the Reo Motor Car Co., 309 Mint Arcade building, are Harry Greenwood and L. E. French.

**New York**—The Railway Auto Car Co., of New York, has been incorporated with a capital stock of \$10,000. Directors: R. Duval, F. O. Brown and Charles Ducas, all of New York city.

**Albany, N. Y.**—The Eagle Garage & Machine Co. has been incorporated, with a capital stock of \$20,000, to manufacture and deal in motors, engines, machines, etc., by W. S. Scudder, E. B. Barber, John C. Scudder and G. E. Townsend.

**Millbrook, N. Y.**—The Petroleum Automobile Engine Co. has filed articles of incorporation with a capital stock of \$250,000. The incorporators are N. E. Batkeman, New York; A. H. Bissel, Montclair, N. J., and J. W. Bain, Brooklyn, N. Y.

**New Brunswick, N. J.**—The India Rubber Co., manufacturer of bicycle and automobile tires, has decided to resume work here again. The company came from Akron, O., some time ago and bought the plant of the United States Rubber Co. and afterwards stopped work to let the

Hartford Rubber Co. operate its plant. New machinery is being installed and operations will begin at once.

**New York**—L. Gordon Carew, agent for the Stearns, has opened his new salesrooms at Broadway and Seventy-first street.

**New York**—The Senor Automobile Co. has been incorporated with a capital stock of \$50,000 by B. F. Steins, G. A. Knoblock and N. B. Vanse.

**Fort Dodge, N. Y.**—F. J. Clifford, late of the H. B. Groves garage, will open an establishment here, having secured an option on the Ford building.

**Indianapolis**—The Capitol City Auto Co., 23 East Ohio street, has purchased the Columbia garage and will handle the Leader as well as store and repair cars.

**Paterson, N. J.**—J. D. Lewis, formerly with Browne & Schmidt, has associated himself in partnership with M. F. Scott and will open a garage and repair shop at 198 Ellison street.

**Columbus, O.**—The Triumph Automobile Wheel Co., of Sandusky, has been incorporated, with a capital stock of \$12,000, by A. N. Spore, B. A. Crosier, L. L. Curtis, C. A. Whitworth and J. Whitworth.

**Springfield, Mass.**—M. A. Gilman, who has for some time been connected with the Hampden Auto Co., but recently sold his interest in the concern, has been appointed agent for Hampden county for the Haynes.

**Augusta, Me.**—The International Oil Engine Co., of Portland, has been incorporated, with a capital stock of \$700,000, to manufacture engines, motors, etc. Incorporators: F. H. Merrill, F. R. Barrett and M. W. Baldwin, all of Portland.

**Indianapolis**—The Gibson Automobile Co., 238 Massachusetts avenue, is putting up an addition to its garage which will nearly double its floor space. The new addition will be used for a repair department. The company has recently added the Premier and Wayne to its line.

**Salt Lake City, Utah**—An action has been filed by the B. F. Goodrich Co., the Hartford Rubber Works Co. and the Warner Instrument Co. against the Utah Automobile Co., the Commercial National bank and the Utah National bank, in which the court is requested to appoint a receiver for the Utah Automobile Co.

**Evansville, Ind.**—An automobile company has been incorporated at Evansville which will be known as the Worth Mfg. Co. The capital stock is \$100,000 and the company will begin manufacturing automobiles within a short time, although the models have not yet been made public. The incorporators of the company are William O. and James Worth, John C. Zutt, W. M. Copeland and A. F. Karges.

## RECENT INCORPORATIONS

**Philadelphia**—Pneumatic No-Puncture Wheel Co., capital stock \$1,000,000; to manufacture, buy, sell and deal in automobiles and all other kind of horseless vehicles; incorporators, D. J. Simon, H. E. Hekler, J. J. Hirschfield.

**Boston, Mass.**—Boston Auto Gage Co., capital stock \$200,000; to manufacture and deal in all commodities used in the making of automobiles and motor boats; incorporators, Chetwood Smith and Louis C. Smith.

**Boston, Mass.**—Concord Motor Car Co., capital stock of \$10,000; incorporators, J. P. S. Alcott, F. A. Pratt and J. E. Savell.

**Cleveland, O.**—American Automobile Co., capital stock \$30,000; incorporators, C. C. Signer, A. L. Brown, A. C. Mackenzie and Charles E. Carpenter.

**Baltimore, Md.**—Chesapeake Motorcar & Boat Co., capital stock, \$25,000; to deal in, hire, store and repair automobiles, motors and motor boats; incorporators, Frederick G. Taylor, Compton Riely and T. Reginald Wis.

**Albany, N. Y.**—Eagle Garage & Machine Co., capital stock \$20,000; to manufacture and deal in motors, engines, etc.; incorporators, W. S. Scudder, E. B. Barber, J. C. Scudder and G. E. Townsend.



# Current Automobile Patents

**Gasoline Carbureter**—No. 825,499, dated July 10; to T. L. Sturtevant, Quincy and T. J. Sturtevant, Wellesley, Mass.—Outside air entering through the downward passage A has to open the hanging scoop-shaped air valve C before it can pass the tip of the horizontal spraying nozzle B. Gasoline reaches this nozzle by way of the pipe E. Gases exit to the motor through the throttled opening C. To vary the pressure required to open or force back to the position shown in the dotted lines of the air valve C a spring D may be adjusted. With the air valve C in the position shown the supply of air is entirely shut off and the passage from the spraying nozzle closed. The aim in using this form of spring-controlled swinging valve is that with greater suction caused by higher motor speeds this valve C is opened further, at which time the space for the air to pass the nozzle is increased, thus, with more air passing, the suction on the gasoline is controlled.

**Motor Speed Control**—No. 825,531, dated July 19; to G. E. Franquist, New York city—A throttle valve in the carburetor for controlling the motor speeds can be acted upon through three different agents. On the top of the steering column is a finger lever with link connections from the bottom of the steering column; an accelerator pedal is placed in the foot-board adjacent to the base of the steering column, and a governor is carried on a lay shaft of the motor. Arrangements among these three control mediums are such that when desired the action of the governor can be entirely cut out.

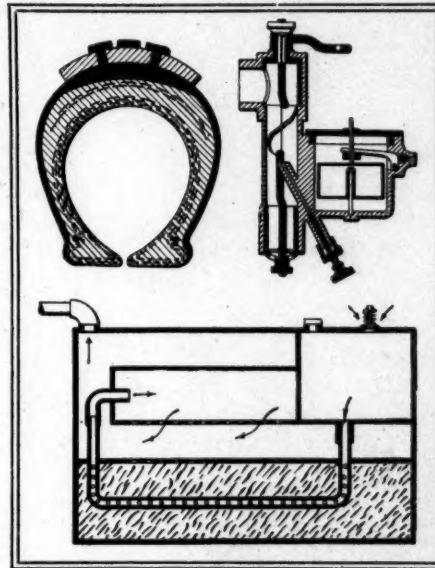
**Hairy Tire Cover**—No. 825,715, dated July 10; to E. Fortier-Beaulieu, Roanne, France—The tire shoe has secured to its

entire outer surface a covering of heavy leather with the hair left in place and exposed to the weather. Attached to the tread of the tire is a heavy tread part of similar leather with the hair left on. A series of rivets secures the tread part.

**Spiral Baffle Throttle**—No. 825,754, dated July 10; to C. F. Pearson, Chicago—In the vertical mixing chamber shown at the

FORTIER'S TIRE

PEARSON'S CARBURETOR



McCORMICK'S SURFACE CARBURETOR

left side is a spiral baffle plate which is rigidly connected to the throttle controlling the exit passage from the mixing chamber to the motor. When the throttle is shifted the position of this spiral is changed.

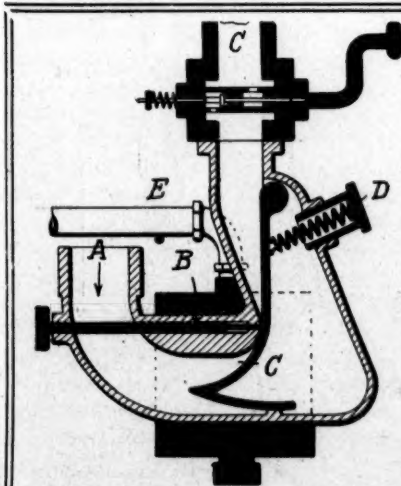
**Surface Carburetor**—No. 825,336, dated July 10; to T. McCormick, Mount Pleas-

ant, Pa.—This carburetor, made in the form of a rectangular box, is divided into an upper and lower portion by a heavy gauze partition, the top portion serving as a mixing chamber and the bottom one forming a reservoir for the gasoline. In the top part are two box compartments. One is in the upper corner, into which the outer air enters and from which a pipe leads into the gasoline compartment and has perforations in it. The other compartment, of oblong lines, receives the other end of this pipe, which passes through the gasoline. It has a perforated bottom, so the gases after entering it pass out through these perforations and finally escape through an opening in the upper left corner of the carburetor to the motor.

**Four-Piece Spark Plug**—No. 825,856, dated July 10; to D. B. Mills, East Orange, N. J.—A short tubular piece carrying one of the electrodes is threaded into the cylinder and has on its inner surface a shoulder and an internal thread at the top. Within this is inserted the insulating piece carrying the central electrode on which the current reaches the cylinder, this insulation resting against the shoulder and held in place by a threaded bushing engaging with the internal thread on the tubular piece.

**Adjustable Steering Knuckle**—No. 825,329, dated July 10; to H. Lemp, Lynn, Mass.—In this knuckle, of the jaw type with a vertical pivot bolt securing the axle end in position between the jaws, wearing plates surround the ends of this pivot bolt, and in the lower jaw is an adjustment piece. It is a cylindrical hub surrounding the pivot and fitting within the lower jaw. Beneath the hub are nut and lock nut.

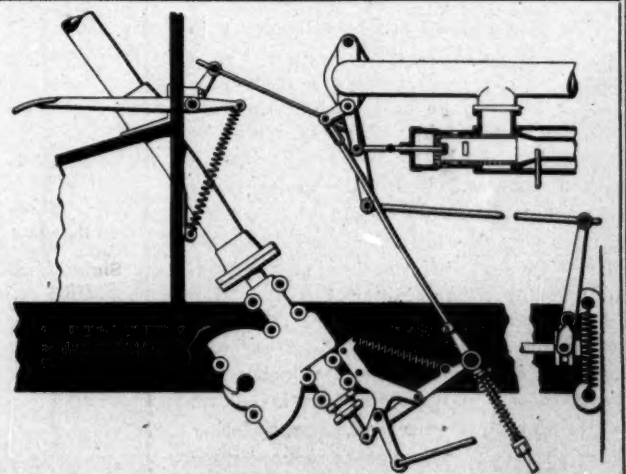
**Signals by Sound**—No. 825,694, dated July 10; to E. and G. Barbaroux, Turin, Italy—Instead of signalling by flags or lights which way a driver intends to turn at a corner or elsewhere, the inventors insert in the exhaust pipe a two-way valve. Two distinct sounds are produced by this valve through the pressure of a pedal. The valve is of the hinged type.



STURTEVANT'S CARBURETOR



MILLS' PLUG



FRANQUIST'S THROTTLE CONTROL

# American Motor League

## OFFICIAL BULLETIN

National Headquarters, Vanderbilt Building  
New York

### POUGHKEEPSIE TO ALBANY

Poughkeepsie is a convenient halfway point in the popular Hudson river route between New York and Albany. From Poughkeepsie the tourist may, at his option, turn eastward and make his way over fairly good roads to the charming Berkshire region in Massachusetts, or he may cross the river by ferry and take his journey westward to New Paltz and thence along the Wallkill valley to Walden, Goshen and Middletown—three important towns in what is perhaps the best route to the famous Delaware Water Gap. From Poughkeepsie northward, the best going is doubtless on the easterly side of the river, though the road on the west bank has its splendid attractions and is being improved from month to month. At Rhinecliff, Tivoli, Catskill and Hudson ferries are running throughout the season and from Kingston and Catskill trips may ton, Oneonta and other western points. This route also runs through a little place made famous during the last presidential election—Esopus, where resides Alton B. Parker, who was the democratic nominee and who made the race against President Roosevelt.

From Hudson a short run to the southeast takes one to Claverack, where the road branches, either branch leading finally to Lenox and Pittsfield. In short, it may be said that this great motor thoroughfare, always interesting and beautiful in itself, supplies a hundred delightful "side trips" to attract the tourist who is not wedded to a schedule and who delights in exploring a little as his journey proceeds.

### FREE TO LEAGUE MEMBERS

This map and all others will appear in the official A. M. L. road books and each league member will receive a free copy. Each route will be described in the text and the best hotels and garages will be listed. The A. M. L. is an organization with a purpose. It invites to its ranks every motorist of character who believes in its work. No initiation fee; dues \$2 a year. Printed information on request. Address American Motor League, Vanderbilt building, New York. This organization is one that deserves success. It has quietly been working for the good of the sport since its inception, gathering material for road maps, assisting in legislative efforts, securing reduced rates for motorists in hotels—in fact, it "does something," and you can help it do more.

